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Keeping Your Staff Happy

Focusing On Retention Pays Off, In More Ways Than One

by Elizabeth Millard

· · ·

ALTHOUGH THE DOT-COM ROLLERCOASTER seems to have come to a gentle glide back to market normalcy, the need for cracker-jack IT people will always remain a constant. Most IT and data center managers are continually on the watch for talented people who've thrown a resume onto Monster.com, but focusing on hiring is only half of having a good staff in place.

A recent report from research firm META Group found that as the economy improves during the next year, key IT employees will seek "greener pastures" in their employment. The firm also reported that salary inflation will drive up labor costs through 2007, meaning that small and medium-sized enterprises could be shelling 10% to 15% more for salaries within the next few years.

For companies that want to keep employees from wandering away, and put a lid on salary costs at the same time, META recommends developing staff retention programs that keep employees happy, and as a result, at their desks.

Making An Investment

"Most of our IT employees don't care that much about money," says Dan Crawford, CEO of Tiburon, which develops public safety systems and applications. "They like to make a good, competitive wage, but beyond that, they are not working for bonuses.

Instead, they stay mainly because they feel personally invested with the company, due to a policy that lets them be involved in long-term strategic planning, technology implementation, and goal setting. Simply handing programmers a project and never telling them what became of all that hard work is bad form, Crawford says. "People like to know that what they're doing has worth, and the best way to show that is by letting them see the outcome of what they've done."

Crawford adds that IT and data center personnel appreciate knowing company aims because it makes them feel part of a larger, successful organization.

"It's all about a feeling of contribution," he says. "Without that, you're going to have people looking elsewhere."

Training Track

While the economy was sluggish, many companies cut down on expenses by doing away with travel and training. But there's no excuse now to leave it out of a retention program.

Surplus Security

Is It Possible To Have Too Much Of A Good Thing?

by Doug Schweitzer

· · ·

SOME MANAGERS MAKE the erroneous supposition that if a little security is good, a lot of security must be better. Too little protection puts the data at risk; too much protection is costly and may affect data and system availability. Once you determine the level of risk your systems face, your team can put in place a balanced security mix that will effectively meet your organization's needs.

Put The Lid On Spam Filters?

One recent technology that has seen explosive growth is spam filters. However, under certain conditions, the use of too-powerful spam filters can

> **Too little protection puts the data at risk; too much protection is costly and may affect data and system availability.**

have a detrimental effect. "At one time in the not-too-distant past, I was receiving 300-plus emails a day. Most of it was not desirable," says Angel Gomez, CEO of TeleComp Research & Development. "The ISP filters and the corporate spam blockers have effectively [reduced] my 'not desirable' email to about 20 per day. A tremendous improvement, but there are side effects."

Gomez contends that if you want or need to see certain advertisements in your mailbox—for instance, those from your suppliers or companies you do business with—you might miss out. Boiled down, an advertisement is really not much different from spam. Multiple copies of identical content are sure to trigger filters, and such content will never get through.

"Even individually addressed letters are trashed, as the filters now look at the entire content. Random words no longer work unless they are grammatically correct. The filters are almost better than your grade-school English teacher," says Gomez.

So how does this affect individual contacts? Well, anonymous mailboxes are now suspect. You may have noticed that email received from such accounts were once the rage. Not anymore. Does your organization have clients with anonymous email accounts? If so, you may have to live with more spam or risk losing those contacts.

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STOCKS FELL THE WEEK ended January 26 as investors digested earnings reports. But trading was volatile and stocks actually rallied the last two days of the week with positive earnings reports and a decline in oil prices. The Dow closed at 10498.59, down from 10539.17 a week earlier. The Nasdaq closed at 2046.09, down from 2073.59 a week earlier.

Texas Instruments Reports Profit Drop

TEXAS INSTRUMENTS SAID its profit fell in the fourth quarter as cell phone demand weakened, but earnings were still better than analysts expected. The company slowed output at some factories and tried to reduce inventories. TI reported net income of $490 million, compared with $512 million a year earlier. Revenue was $3.15 billion, up 14% from $2.77 billion a year earlier. Meanwhile, TI set aside $2 billion for stock buybacks.

SAP Reports Rise In Net

SAP REPORTED a 29% rise in fourth-quarter net profit due to strong growth of software licensing in the Americas. The company reported net income of $703 million, citing a 27% growth in the Americas' sales. The company forecasts that full-year revenue will grow 10% to 12% in 2005.

EMC Forecasts Strong Data Storage Growth

EMC SAID it is seeing a pickup in corporate spending for IT in general and for its own storage business. Echoing comments from IBM, EMC believes that IT spending will grow in 2005, and that demand for storage will grow 70%, the highest level since 1999. In the fourth quarter, the company said net income surged 46%.

Sun Pledges To Make Patents Freely Available

SUN MICROSYSTEMS SAID it will provide free access to 1,600 patents as part of a plan to make its Solaris 10 operating system available to the open-source community. Trying to make its software as attractive as Linux, Sun says that the operating system will be available for free download next week. The company hopes to make money selling servers and support.

Microsoft Plans Crackdown On Piracy

MICROSOFT PLANS TO require that customers verify their copy of Windows as legitimate before letting them download security patches and other add-ons for the OS. The company has been testing a tool that can check whether a version of Windows is legitimate. Starting February 7, the verification will be required for consumers in Norway, China, and the Czech Republic. Those consumers will be offered a discount on a genuine copy of Windows for $10 to $150.

Identity Theft Mostly An Offline Problem

A SURVEY REPORTED that the most common cases of identity theft have nothing to do with the Internet and the number of incidents is declining. About 68% of identity fraud cases were committed with information obtained offline, according to the Better Business Bureau and Javelin Strategy & Research. The most common source is a lost or stolen wallet or checkbook. Getting personal information online accounted for 12% of cases.

Rambus Files Four New Suits

RAMBUS HAS BEEN BURIED in litigation, but the creator of memory chip technology filed four more suits against DRAM chip makers for violating its patents related to DDR2 DRAM chips, which have been used in PCs since last year. The company is suing Hynix Semiconductor, Nanya Technologies, Infineon Technologies, and Inotera Memories. Rambus also has pending suits against Infineon, Hynix, and Micron related to other memory patents.

Flextronics Reports Strong Profit Growth

CONTRACT MANUFACTURER Flextronics said net income for its fiscal third quarter rose more than four-fold on improved efficiency and smaller restructuring expenses. That was in spite of weak demand for high-tech gear. The company makes everything from cell phones to printers. Flextronics reported net income of $98.7 million, up from $21.4 million a year earlier. Revenue grew 3% to $4.28 billion.

Red Hat Unveils New Software Suite

RED HAT HAS BEGUN testing software that makes it simpler for programmers to write software for the company's different versions of its Linux OS. The company introduced the new Application Build Environment to testers so that they can create higher-level software that works smoothly and reduces support calls.

CA Doubles Net Income

COMPUTER ASSOCIATES SAID that net income doubled to $36 million as the software company reported sales growth for its Netegrity acquisition. Sales grew 9% to $911 million, but it would have been up only 3% without currency gains or the Netegrity sales. Netegrity makes software used to manage passwords and sign-on procedures.

SBC Reports Layoffs, Drop In Income

SBC COMMUNICATIONS SAID its net income for the fourth quarter fell 17% to $754 million as the phone company was hurt by severance payments and costs related to its merger with Cingular Wireless. The company also said it plans to cut 7,000 jobs this year through attrition as it fights declines in its local-phone business.

Lawmakers Worried About IBM-Lenovo Deal

MEMBERS OF CONGRESS have expressed concern about the security risks involved in IBM's sale of its PC business to China's Lenovo. Three high-ranking members of the House of Representatives sent a letter urging oversight agencies to investigate the sale. Part of the reason is that IBM includes considerable security technology on its laptops.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 15 major companies in the technology market.

Company	Symbol	Jan. 26 $	Jan. 19 $	% change
Avaya	AV	$14.48	$15.90	▼ 9%
BEA Systems	BEAS	$8.74	$8.50	▲ 3%
Computer Associates	CA	$26.70	$27.63	▼ 3%
Cisco Systems	CSCO	$17.69	$18.15	▼ 3%
Dell	DELL	$40.45	$40.06	▲ 1%
Electronic Data Systems	EDS	$21.88	$21.55	▲ 2%
Google	GOOG	$189.24	$197.30	▼ 4%
HP	HPQ	$19.59	$20.28	▼ 3%
IBM	IBM	$91.95	$93.10	▼ 1%
Intel	INTC	$22.42	$22.60	▼ 1%
McAfee	MFE	$25.19	$25.45	▼ 1%
Microsoft	MSFT	$26.01	$25.98	▲ 0.1%
Oracle	ORCL	$13.62	$13.47	▲ 1%
Red Hat Software	RHAT	$11.11	$11.49	▼ 3%
Sun Microsystems	SUNW	$4.15	$4.17	▼ 0.5%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

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The *Processor* Showcase section features new products and services available from hot new manufacturers, as well as the old standbys. It's an easy way to compare products and discover new technologies and solutions, so refer to it for all your buying decisions.

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Communications
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Cabling, Environmental Controls, Fire Protection, Power Distribution, Racks

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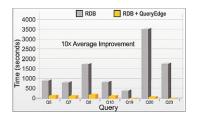
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Mix & Match

Find The Right Employees For Your Firm

by David Garrett

• • •

WITH SOME BEGGING, pleading, and the grace of God, you've been given permission to make a new hire, one you desperately need for your burdened IT staff. But there's a hitch. Of course.

You like two candidates, the first of whom is perfectly qualified. He's an MCSE and a CNE, and he boasts a nine-year resume in building networks for companies like yours. He also spent two years training network admins at a local school.

The second is less qualified by far. An A+ is his only cert, and he's spent no more than two years in the corporate world. Before that he was a student—of Russian and French, no less. But he took his AB summa from Princeton, and during his interview he blew your mind with his raw intelligence and drive.

Which do you hire?

Be Like Bill?

According to Randall E. Stross, an academic and author of "The Microsoft Way," the smartest, best firms choose their people for their intelli-

> What's more, a person's talent for learning is far more important than his experience or lack thereof.

gence and raw aptitude first and experience second.

It's their belief that technical skills can always be learned, but the ability to learn them—and learn them quickly, in bulk—is innate. What's more, a person's talent for learning is far more important than his experience or lack thereof.

But will this way be good for your company? And how do you know the employee you're about to hire is a good match for your corporate culture?

First, you need to know your own culture intimately—and honestly. Not every office is the same, and not every firm is a good place to work. Is your culture light and loose, or do you insist on three-piece suits and leather shoes every day? And then, of course, there are questions far more vital than dress code. How does your rank and file treat your support staff? Is your CIO an MBA or an MCSE? Is your IT group a profit center, or are you asked to relentlessly cut fat from your budget while other departments (sales comes to mind) spend money like water?

Although each of these questions may seem tangential to your new hire, they are, in fact, dead center to his

future in your firm. For instance, if you work in a loose, lax office where a long lunch will barely raise an eyebrow, it may be safe to hire a prospect who's never worked in an office before or one who's right out of school. But if your office is run like a drill sergeant's domain, you'll want someone who's used to toeing the line and knows the ins and outs of office politics. If you're about to hire a support tech and your support group comes under daily abuse from higher-ups in the food chain, you'll need to find someone with grace under fire, an employee who can defuse a hostile temper without losing his own temper.

The Softer The Better

Skills such as these, skills outside the direct field of a person's expertise, are known as soft skills. They include writing and presentation skills, conflict management, self-control, perseverance, the work ethic, and the ability to innovate, to name a few. And they're rarely used as metrics to measure an IT candidate in a job interview.

Why? Because soft skills are almost impossible to measure. You can easily test a person's knowledge of Cisco routers or "if" loops in Perl scripts, but you can't gauge his talent for dealing with a crabby CEO until you see him in action. And the second of those skills, taming the top brass, is the one that could make or break his tenure at your firm.

So how do you vet a prospect's soft skills before you extend him an offer? Start by looking past his resume, which is nothing but a flimsy sheet of paper. In the interview, ask him to role play, using problems such as these:

• The network is down and, because a backup tape was damaged by water from a broken pipe, we've lost the last two days of email. Explain to the irate comptroller that he'll have to close out this month's financials again and why.

• You have the chance to learn Oracle at the firm's expense. They'll send you to night school for six months, and you won't have to pay a dime. Or, you can put in an extra hour a day for the next six months and rewrite our email privacy policy, our data backup policy, and our disaster policy. Which do you choose to do, and why?

• You find out that a good friend and senior manager has abused his expense account, and worse, that part of that abuse entails dinners he's treated you to on the corporate nickel. What do you do?

These questions give you a sense of how your prospect will match your culture, a point that won't be found on his CV. They'll give you insight into his work ethic and sense of ethics, not to mention his potential as a team player and a constant learner. And they'll help you measure what can't be measured, which, in the end, is the key to finding the best people. **P**

Mining For Gold

Right now, the market is swamped with out-of-work IT mavens. And while they may be a dime a dozen, how do you find and recruit the best of them to work for your firm? You can start with job boards, such as Monster (www.monster.com), Job.com, UpLadder (www.upladder.com), and others designed for the IT industry, including the IT Job Board at www.computerjobs.com, Dice.com, Developers.net, and more.

But job boards do little but give you names and resumes. Sometimes it helps to have a human touch in the selection process, and expert recruiters (the kind that meet and greet IT pros every day) can help you get the wheat from the chaff in record time. Top IT recruiters include Robert Half Technology (www.roberthalf technology.com), the largest in the field, and smaller, more specialized firms, such as Richard Wayne & Roberts (www.rwr.com), that have IT specialists on staff.

Keeping Your Staff Happy

"You should think of training not as a way to teach staff skills they can use at the company," Crawford notes. "That's just a benefit, when it works out." The main point of funding extensive training, he says, is that it makes employees feel that they have currency in their field and that they're up-to-date in the industry.

Many organizations have found success when they let their employees choose what kind of training they'd like to take, even if it doesn't seem relevant to their tasks at hand. So, if a COBOL programmer expresses a desire to learn about wireless networking, Crawford says to write the check.

"Giving them freedom to pursue whatever avenues they want is a sign that you care about their future and that you want them to stay current with what's new without having to leave your company," he says.

Also vital is to understand that IT employees might show potential for fields unrelated to their current jobs, such as staff management or systems integration. Managers should watch for untapped skills such as these and help develop training programs that can hone those talents.

> ## The main point of funding extensive training is that it makes employees feel that they have currency in their field.

The Friend Factor

If an employee works with friends, he's often more inclined to stay at a company. With that in mind, some firms are offering referral bonuses that hearken back to the dot-com days. At NetQos, for example, CEO Joel Trammell gives an employee $3,000 if someone she's referred gets hired. "Good people know other good people," Trammell says. "Plus, it makes a more cohesive team to have people work together who are already friendly." Since implementing the program, as well as other staff retention strategies, the company has boasted a 95% retention rate.

Gold Star

Remember when you were a kid and you'd get a school paper back with a drawn-on smiley face or other indication that the teacher thought you did good work? That feeling of accomplishment is still a powerful force, and borrowing that technique for employees can often inspire that same giddy rush from grade-school days.

Not every project has to elicit a "Good Job!" for those who worked on it, but it's important to put some type of acknowledgement system in place. Even just a short note thanking someone for their help can be satisfying.

Some managers feel that such tactics pander to employees and that they shouldn't have to reward staffers for simply doing the work they've been assigned. But those managers are often the ones to get blindsided by resignation letters.

"We give out award notices based on certain standards," says Crawford. "Everyone knows what they have to do to get an award, and they'll work harder just to get it."

Incentives can also take the form of products, especially the delightful little tech products that populate the dreams of every geek. Rob Roberts, director of marketing at SAP implementation company Enter-Sys Group, says that even though his staff can buy an iPod or a flat-panel TV, it seems to mean more when it's coming out of the company's coffers.

"When you get something as a reward, it feels different," he says. "You can look at the iPod and feel like you earned it, because you did. That can be powerful."

Paid To Play

Finally, there's one important retention strategy that works especially well with IT employees. Let's just call it the power of the gadget.

Who's Leaving?

According to the META Group, there are some types of IT employees who are more likely to stray. In the firm's poll, these are the three specialties with the highest turnover:

- Application development
- Security
- Networking

Crawford says, "The average techie likes to be working with new stuff." Even if an employee is in charge of legacy systems, Tiburon gives them the opportunity to work on new equipment that's just come in or play around with different systems on company time.

"What it all comes down to is, what do your employees really want?" Crawford notes. "Find out, and develop a program around those goals."

Surplus Security

Customer Service Is Key

Another area where excess security might rear its ugly head is where there exists a lack of proper training. "It's important to realize the distinction between the security needs in the [small to midsized business] as compared to those of the public company, where size does matter. The SMB knows the customer wants quality and provides exceptional goods and services to stay in business," says Jack Seward, a consultant and digital forensic accounting technologist based in New York City.

Seward believes that SMB owners and executives presumably already understand that the major security threats come from the "untrained employee with a computer." Says Seward, "My advice: Take the money and train your employees to serve your customers first."

No Such Thing As Too Secure

In an industry awash in antispam, antivirus, firewalls, intrusion detection systems, and other network defense mechanisms, is it really possible for a company to get carried away with security to the point where it is ultimately locked down too tightly?

"Being 'too secure'—for example, having excessive information security controls, too many controls, being too restrictive, or whatever—is not something I see very often. But then I would say that as an infosec and IT audit professional, I'm somewhat paranoid by nature," says Dr. Gary Hinson, chief executive of U.K.-based IT governance consultancy IsecT.

Hinson isn't the only one to feel this way. According to Marcus J. Ranum, CSO of Tenable Network Security, "Most organizations that think they are locked down too tight aren't close to locked down enough."

Hinson maintains that any really excessive controls would not be tolerated by an organization, either by its users or managers. They would either be rejected outright or be bypassed, which is more common, as well as more problematic.

A classic example is the typical "no tailgating" rule implemented by many organizations. "I don't think I have ever once been asked for my ID when tailgating into a building behind someone. In fact, I can barely remember having been asked for ID, especially away from the security or reception desk. The day-to-day practicalities mean this kind of procedural control is seldom very effective, at least not outside a military environment, and even they are far from perfect," adds Hinson.

A more insidious issue, though, is that slightly excessive controls are all around us but are not recognized as such. "Some of my peers in the profession do not seem to realize that all controls impose additional costs in specifying, designing, implementing, operating, maintaining, reviewing compliance, etc. For example, every time I log into the system, it takes me a few seconds to type in my user ID and password, and if I forget my password, there's the rigamarole of stopping to think about what password I used, trying several times, then calling support to get it changed," says Hinson.

Operational control costs like this seem relatively trivial, but they soon accumulate to large proportions, especially in bigger organizations—easily a couple of minutes per person per working day on average.

"Nobody in my experience has made the effort to analyze these costs explicitly in order to assess them against the cost of not having the controls (i.e. the project losses through the occurrence of security incidents)—my peers and managers in general normally just blindly assume that the cost-benefit assessment is positive, unless they find some aspect of the control really objectionable," adds Hinson.

What's In Your Arsenal?

While any security measures implemented are good, too much of a good thing can be counterproductive. By choosing your security arsenal wisely, you can attain a high degree of security without worrying about going overboard. In fact, with the following security products in your arsenal, you will be hardened against 99% of the problems you're likely to encounter, provided you are sufficiently tightened down on security policies that cover viruses and IM use, as well as the application of patches at least once a week.

- ☑ Firewall
- ☑ Caching/filtering Web proxy
- ☑ Attachment-stripping firewall
- ☑ Antivirus software on workstations and servers
- ☑ IMAP server
- ☑ Intrusion detection/prevention

Are They Right For Me?

Notes On Finding The Right Employer

by David Garrett

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SO, YOU NEED A JOB.

Maybe it's your first gig out of school. Or maybe you merely hate where you are, and you're looking to upgrade. Either way, employers will do their best to scope you out, to vet you, and to ensure you're a match for their needs. But do you judge them?

How, for instance, do you know the firm you're about to sign on with is a good place to work? How do you know it's a match for your style, hours, and personality? And how can you save yourself from signing on to a nightmare?

Jeff Combs, a recruiter at Alta Associates, knows how. Alta has a 20-year record of finding employees, with 10 years placing IT security experts. It's matched thousands of employees and employers, and it knows that a firm's culture—the way it does business—is vital to your success.

"Before we send you into an interview," says Combs, "we like to assess the general culture of the company and whether or not it's a fit. If you're an entrepreneurial person who thinks fast and likes to get things done quickly, you won't always enjoy a Citicorp. A small company may fit you better."

"By the same token," he adds, "if you're someone who wants to follow a more professional career track and you want to get involved with large initiatives, you'll need to look for an organization that has that kind of professional culture, the culture that's going to support your personality."

Plan For The Future

But there's more than size to consider. If you're on a career track and looking to make it big, Combs suggests you analyze the future prospects of the firm you've applied to. "What's their growth strategy?" he says. "Do they have long-term development opportunities for you?"

If you want a career you can grow with, the kind where you can assume progressively larger roles, you should find a firm that's moving forward, not a static place where you're given a specific task to repeat ad infinitum.

Remember that boredom is one of the leading reasons for burnout. As you shop around for new employment, look for a place that will keep you on your toes and challenge you when you need it.

Dig For The Dirt

Of course, there's only so much you can glean from an interview. And the information you'll get, whether it's from an HR type, a potential colleague, or a future boss, will always be rosy.

That's why Greg Malever, president and CEO of Lanta Technology Group, tells his candidates to dig around. Featured on CNN, NPR, and *The Wall Street Journal*, Lanta is one of the nation's premier recruiting firms for growing IT companies and routinely counsels its candidates to speak to anyone they can at the firm they're about to join.

"For the most part," says Malever, "the person that's trying to hire you won't give you the complete story. He'll try to talk you into taking the job." As a result, you'll need to ask other workers what they think of the company and whether they're happy.

"Ask the people who've been there a while," he says. "Ask the people who've been up through the ranks and see what they like and don't like about the place. If they're quiet, that's a bad sign. They're either going to be up front or very hush hush."

Depending on the size of the company, Malever will speak to the founder, the board of directors, investors, and people he's placed there before. To him, they're an essential source of data, not to mention an honest source of strong options.

"If you want the real deal," he says, "try to speak with people in departments other than yours. They won't have a vested interest in getting you on board, and they may be more honest."

Keep Your Eyes Open

Alta's Jeff Combs also suggests you keep your eyes open. "When you're in the building," he says, "look around. Get a sense of the dress code. Is it like yours? Or is it too stiff and formal?"

And don't forget to note the environment. "Is this a place where the décor is completely outdated, or do they spend money to make the workspace livable?" says Combs. "Companies that make a real investment in their employees will put their money back into the work environment."

Both Malever and Combs note that smart job seekers do this as a matter of course. They don't take the information they receive from recruiters and potential colleagues at face value and insist on doing their research. The result? They often find jobs they like, not jobs that merely pay the rent.

A Job Hunter's Checklist

Sometimes what's not said is just as important as what is. When you interview, look for nonverbal clues that tell you about the place you're in.

- Do people work with their doors open or closed?
- Do they greet you in the hallways or shuffle by?
- How new is the office equipment?
- What kind of PCs do the rank and file use?
- Is the atmosphere rushed or laid back? Is it loud or silent as a tomb?

Is Smaller Better?

A small firm—and even a startup—may be the right place for you.

Small firms tend to be less bureaucratic than big players such as AmEx or Pfizer. Hence, you'll often be asked to do work outside your job description—and do it without complaint. While this bothers some, it's a precious chance for others who want to expand their skills and their importance in the firm.

What's more, small businesses may be the best places to troll for jobs in the future. According to AMI-Partners, the number of small firms across the globe will increase from 77.4 million in 2003 to a whopping 87 million in 2008.

Staff Training

Take It Beyond The Technical

by Sixto Ortiz Jr.

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A KEY QUESTION for most managers is determining the training needs of their employees. For IT positions, much of the training is composed of the bread-and-butter courses required to stay ahead of the technology learning curve.

But, IT personnel can no longer afford to rely solely on their technical credentials to build successful careers. The days of isolated techies who rarely interact with the rest of the business are history. Today, IT personnel must develop the business skills necessary to make sound business decisions.

So, if you want to develop people who will grow beyond their specialized niche, training in business skills such as leadership and communications is absolutely essential for success.

IT & Business: Merging Into One

One of the enduring business legends (part myth, part reality) is the tale of the socially challenged techie who can't quite bridge the gap between what end users need and what he is able to deliver. This techie has tremendous IT know-how but lacks the business skills required to translate end-user requirements, grounded in business rules and processes, into the technical language he is comfortable with. It's as if both parties are speaking different languages.

IT is now a strategically important function in many enterprises.

For example, ERP systems such as SAP are now centralized repositories of vital business processes; in many enterprises, the installation of mission-critical applications such as ERP and CRM systems has required the retooling of business processes to take full advantage of an application's functionality.

Also, the continuing evolution of ecommerce requires that IT personnel tasked with developing and maintaining ecommerce applications have a keen understanding of how business transactions are done. Ecommerce technologies, such as Web services, are now designed to shield developers from the arduous task of coding applications from the ground up. Instead, developers combine pieces of preassemble code into larger, more sophisticated business "objects" that automate previously labor-intensive business processes.

In fact, the trend in IT is rapidly moving from the procurement, implementation, and maintenance of specific hardware or software to the use of solutions that span across enterprise business processes and are composed of multiple individual products and/or services. To be able to choose a solution that delivers maximum return for the business, the IT personnel doing the job must understand the business needs of the enterprise.

The end-result is simple: Today's IT personnel cannot function without an understanding of how a business works. IT personnel are working closer to the end user than ever before and must develop the skills necessary to listen well, understand business requirements, and successfully translate those requirements into technology projects and initiatives that yield a return for the business.

What Business Skills Are Needed?

Joe Santana, co-author of "Manage IT" and contributing author for the "Professional Services Firm Bible," points out in a recent article ("How HR Can Help Companies Address the Need for New 21st Century IT Management Competencies") that today's CEOs expect all functions in their organizations, including IT, to focus on revenue growth. This means CIOs can no longer remain complacent and expect to earn career points by focusing solely on cost savings.

"As IT initiatives drive an increasing number of business decisions," says Katherine Spencer Lee, an executive director at Robert Half Technology, "the professionals in your department must also anticipate and respond to the needs of internal and external end users, as well as understand business fundamentals." In fact, adds Lee, employees who remain specialists in technical areas may not be achieving their full potential. Skills such as project management, leadership, and communication are critical for the next generation of IT managers.

CIOs need to develop the business skills necessary to transform their IT departments, previously considered revenue-draining cost centers, into revenue-generating business units, says Santana. To accomplish this, CIOs and their personnel must understand business concepts such as budgeting and ROI. A CIO who isn't comfortable developing, presenting, and defending financial information is at a distinct disadvantage when the time comes for upper management to decide how to distribute scarce resources amongst competing priorities.

Other critical skills Santana thinks are necessary to achieve the transformation of the IT department include managing leaner teams of versatile professionals, managing relationships with outsourcing partners, relating technology to revenue results, solution packaging, marketing, and selling and business communications.

Cross-functional conflict resolution, time management, interpersonal skills, receiving and using feedback, and working in

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The Path Forward To A Winning Training Program

Joe Santana, IT organizational development specialist and co-author of "Manage IT," recommends a series of decisions that CIOs and other IT managers can make to develop a training program for employees in your organization.

- Determine the specific technical and nontechnical competencies for your employees

- Determine the specific competencies your personnel already have

- Create development plans using the various training tools and methods available to you to close the gaps

- Institutionalize the regular assessment and creation of development plans for new hires

- Institutionalize the annual assessment of competencies needed and competencies in inventory so the development process can be kept up-to-date

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Training Institutions

Many types of training programs are available to those looking to find work in the IT industry, as well as those already working in the industry who want to improve upon their skills.

Executive MBA programs. Executive MBA programs are designed for working professionals who can only attend schools part-time. A large number of institutions all over the United States that offer traditional MBAs also offer EMBA programs. Examples include:

- Rice University in Houston (jonesgsm.rice.edu)
- Tulane University in New Orleans (www.freeman.tulane.edu)
- University of Chicago (gsb.uchicago.edu/execmba)
- University of Texas in Austin (www.mccombs.utexas.edu/exceed)

IT training schools. These schools have campuses all over the nation and offer an entire catalog of IT training, both classroom-based and online. Examples include:

- American College of Computer and Information Sciences (www.accis.edu)
- DeVry (www.devry.com)
- ITT Tech (www.itt-tech.edu)
- Netcom Information Technology National Bootcamp (www.netcominfo.com)
- New Horizons Computer Learning Centers (www.newhorizons.com)
- Real MCSE Bootcamps (www.realmcsebootcamps.com)

Corporate schools. Many well-known IT companies offer training schools centered on their specific product offerings. Examples include:

- Cisco: Networking Academy Program (www.cisco.com/en/US/learning/netacad/index.html)
- HP: Education & Training (www.hp.com/education)
- IBM: Global Services division (www-1.ibm.com/services/us/index.wss/home; click the Training link)
- Oracle: Oracle University (education.oracle.com)
- Sun: Training For IT Professionals (www.sun.com/supportraining)

Staff Training

Continued from Page 9
multicultural environments, adds Santana, are also examples of basic business skills that may be needed in just about every organization. Finally, Santana emphasizes that understanding the business your company is in and how your company competes is essential.

Providing The Soft Skills

In spite of the importance of developing employee soft business skills through training, the statistics indicate many enterprises are still not providing this type of training to their technical personnel.

Recent data collected by Robert Half Technology from a survey of 1,400 U.S. CIOs, says Lee, showed over 47% of CIOs polled

do not provide IT professionals with instruction in soft skills, such as business and communication

fundamentals. "These results," warns Lee, "suggest that many IT executives may be turning a blind eye to the importance of soft skills to their staffs' success."

Fortunately, the advent of new technologies gives you a

> **Technology professionals have more reason than ever to strengthen their nontechnical experience to move their careers forward.**

tremendous array of options for training your employees. For example, says Santana, many of the e-learning system market leaders are now providing modules that address soft business skills.

But, warns Santana, these are not skills that can be easily learned via a company's e-learning system, which is only useful for conveying basic information.

Instead of focusing exclusively on e-learning, Santana recommends an approach that combines e-learning or classroom training with group coaching. Coaching is very useful, says Santana, for reinforcing information learned through other means and for changing behaviors.

Other ways you can provide training for your IT personnel, says Lee, include topic-specific workshops run by training companies, electronic training programs such as CDs and videos, and interactive distance learning using the Internet, a company intranet, or traditional teleconferencing.

Lee adds that employers should not only support nontechnical training through internal programs or tuition reimbursement for external courses, but provide staff the time and resources to take advantage of education opportunities.

Knowledge Is Power

Deep technical skills, says Lee, will always remain at the core of every technology professional's skill set. But technology professionals have more reason than ever to strengthen their nontechnical experience to move their careers forward.

The outsourcing of many technical disciplines, such as programming, should serve as a warning to those employees who wish to focus exclusively on their areas of technical specialization. Ultimately, career development is an in-dividual's responsibility. But those who don't expand their horizons may ultimately find their jobs outsourced.

And those who learn? Well, organizations are definitely going to need IT-savvy managers with the business skills required for managing relationships with offshore companies.

The Hot Specialties For 2005 & Beyond

Information security and help desk/end-user support are among the IT specialties projected to experience the most growth in 2005. While technical stalwarts such as networking and security will grow, specialties such as project management, which require a level of basic soft business skills, are also poised for growth. Applications development is also an area where an understanding of business processes and functions may be beneficial for practitioners.

IT HIRING INDEX
Specialties Experiencing The Most Growth
Projections For 1st Quarter 2005

- NETWORKING
- OTHER/DON'T KNOW
- DATA/DATABASE MANAGEMENT
- PROJECT MANAGEMENT
- INFORMATION SECURITY
- HELP DESK/END USER
- INTERNET/INTRANET DEVELOPMENT
- APPLICATIONS DEVELOPMENT

10% 20% 8% 11% 21% 13% 8% 9%

SOURCE: ROBERT HALF TECHNOLOGY

Soft Business Skills Training Still Lacking In Many Enterprises

In spite of the importance of soft business skills, 47% of CIOs surveyed do not offer IT staff training in nontechnical areas. While the need is clearly there for more well-rounded IT personnel, it appears CIOs are either not convinced of the benefits or are having a difficult time juggling scarce resources and priorities in order to provide employees with the most diverse training possible.
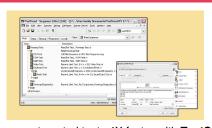
Training In Business Communications & Fundamentals

Poll Question: Do you offer your IT staff training in nontechnical areas such as leadership, communication, project management, and business fundamentals?

- YES
- NO

47% 53%

SOURCE: ROBERT HALF TECHNOLOGY

The Employer's Market Won't Last Forever

Implement Workforce Planning Now To Avoid Staffing Shortfalls

by Ericka Chickowski

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ABUSIVE MANAGERS take heed: The glory days of the recent employer's market will come to an end. And when they do, well, you're in trouble.

But it isn't just the offending managers who need to pay attention to shifts in the workforce, says Diane Berry, Gartner managing vice president. (Those people probably don't care enough to understand the dynamics anyway.) Just about every manager should be thinking about what they can do when good employees become scarce again because that time is coming. And those who plan well in advance are the ones who are going to be able to meet their workforce needs when the time comes, says Berry.

This topic is one of Berry's pet projects. Last fall she presented ways to plan for workforce changes, and she continues to lecture her clients on the benefits of workforce planning.

Workforce Growth To Level Off

Due to a confluence of circumstances, the growth in the U.S. workforce that has been seen in the past three decades is going to slow in the coming years. The American family has been shrinking, and the workforce is growing older, making working-age adults proportionally more scarce than in the past. According to a report done by RAND and the U.S. Department of Labor, by 2050 there will be one elderly person for every three working-age adults in the United States.

In the more immediate future, the report says, the annual workforce growth rate is expected to grow increasingly static by the end of the decade. In just five years, the growth rate will be stalling out at 0.4%. Compare that to the average 1.1% growth in the 1990s and 2.6% in the 1970s. As this growth in workers slows, the job market is expected to continue expansion. The Labor Department's Bureau of Labor Statistics predicts that by 2010 there will be about 10.3 million more jobs available than there will be people to fill them.

This low rate of workforce expansion is going to have repercussions in the IT field because highly skilled jobs are typically hardest hit during a workforce shortage, Berry says. This is especially true as many employees continue to heal emotional wounds from such a battering in recent years.

"When you look at all these things and an aging workforce and see companies right sizing, we think we are going to start to see folks lose their focus and their loyalty," Berry says. "On top of that, kids are seeing what is going on, and they are saying, 'I'm not going into that industry.' When you look at all of these environmental factors, you start to worry about how we are going to maintain the workforce."

What Can You Do?

If a business had a hunch that there may be future supply issues with an important part needed to manufacture its product, what do you think the managers would do to address that problem?
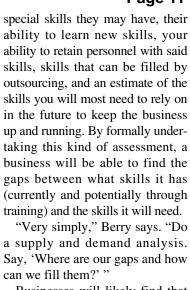
Most likely they would do a comprehensive supply and demand analysis, taking into account how many of these parts they have and how dependent they will be on the part in the future, and thinking of alternate ways to get their hands on the part if their primary supplier can't provide it anymore.

Berry says that most businesses don't think of the workforce in the same fashion as hard commodities, so those types of analyses never happen when it comes to assessing their employee base and the skill sets contained in this base.

"Most businesses usually don't do a skills inventory, so they might have the capabilities to build for the future and not even know it," she says.

Planning for the future starts with a comprehensive analysis of who you have on staff and the special skills they may have, their ability to learn new skills, your ability to retain personnel with said skills, skills that can be filled by outsourcing, and an estimate of the skills you will most need to rely on in the future to keep the business up and running. By formally undertaking this kind of assessment, a business will be able to find the gaps between what skills it has (currently and potentially through training) and the skills it will need.

"Very simply," Berry says. "Do a supply and demand analysis. Say, 'Where are our gaps and how can we fill them?' "

Businesses will likely find that the biggest shortfalls will be specialty positions higher up the food chain.

"I would say that you are going to see shortages in the more highly skilled worker," Berry says. "Those hard-to-fill positions in IT are usually the vendor management, business-oriented position. We are moving away from gaps in the more transactional positions as we continue to outsource."

Filling The Gaps

Once managers understand where gaps will be, it is time to start planning. It may take some creative thinking to keep your needs satisfied. For example, when it comes to the IT ranks, managers tend to forget that there are plenty of candidates from the business side who are willing to learn technical skills in order to fill the gaps.

"The goal here is keeping strategic level positions filled," she says. "One of the things I mentioned at the Symposium [Gartner Symposium ITXPO 2004] is tapping into the business side of the house. IT people don't have to always come through the IT chains."

If morale is low from cuts in staffing or benefits, this is also the time to begin anew the build-up of good feelings between the employees and management. Only you as the manager can understand how much past mistreatments have damaged loyalty among your staffers.

"I think you have to answer that on an individual basis," Berry says. "There are some folks out there whose loyalty is so shattered that it is going to be really hard to rebuild. Take a look at how your staff was treated and really try to target the ones you absolutely can't live without."

As you begin to think about filling future gaps, it's also important to develop training plans. Businesses often waste money on training employees in skills that they won't use day-to-day in their jobs. If you've done a good job with your skills inventory, you should have a better picture of where your employees need to be down the line and can plan training a little more systematically.

One of the last ways to consider filling gaps is retaining your older workers. As the overall age of employees lengthens, retirement is going to be one of the biggest sources of brain-drain in your organization.

"Those folks that are retiring may still need or want to be in the workforce," Berry says. "In the past we just let 'em go. But these days, folks are more willing to stay if you offer them the flexibility of part-time work or more flexible working conditions."

Constantly Adjust

When developing and tweaking workforce plans, there should always be short and long-term timelines, notes Diane Berry, Gartner managing vice president.

Workforce Strategy & Timing Questions To Answer

Strategy	Planning	Resource Assembly	Execution	Deployment
3+ years	1 to 3 years	1 year	1 to 6 months	1 month
• Where will our company be? • What businesses will we be in? • What kind of people will we need? • With whom will we partner? • What kind of investments must we make?	• What will be the IT organization's role? • What skills, knowledge, proficiency and competencies will we need? • What should we focus on? • What delivery models should we use?	• Where are our gaps? • Which skills should we build? Buy? • Do we have professional development plans? • How many people should we prepare? • With whom will we work?	• For what work do we have the right skills? • Which gaps can we fill? • Which gaps can't we fill? • Who and what gets priority?	• Who should we assign to what role?

SOURCE: GARTNER

Develop Timelines

Effective workforce planning is an ongoing cycle, says Diane Berry, Gartner managing vice president. Hiring managers should be constantly tweaking workforce policies based on the market and how well they are executing current workforce strategy.

Effective Workforce Planning Process

1. Set Strategic Direction
- Organization's strategic vision, mission, and objectives
- Human capital strategy

2. Perform Workforce Analysis
- Supply analysis
- Demand analysis
- Gap analysis

3. Develop & Implement Workforce Plan
- Develop strategy and plan to close the gap
- Communicate and implement the strategy and plan

4. Monitor, Evaluate & Revise
- Assess the effectiveness
- Make adjustments
- Address internal/external changes and new organization needs

Workforce Planning

SOURCE: GARTNER

PRODUCT RELEASES

ADAPTERS, CONTROLLERS & NETWORK INTERFACE CARDS

■ The LP1005DC from **Emulex** is a new SAN host bus adapter for use in IBM's HS20 and HS40 BladeCenters. This dual-channel adapter is driver-compatible with Emulex's other HBAs and is qualified for use with both Windows and Linux. The LP1005DC has an architecture based on updatable firmware and the sixth generation Fibre Channel Thor controller for flexibility and power.

DATA COMMUNICATIONS

■ The new EDG-6528 from **Advantech** is meant to provide 10/100 Ethernet connectivity in industrial environments. The eight-port Ethernet switch has an operating temperature range of between 32 and 158 degrees Fahrenheit and has no problem working with unregulated voltages. The EDG-6528 can protect against surges as high as 3,000VDC and is compatible with a wide voltage range from 12VDC to 48VDC. The compact de-sign mounts to DIN rails or fits into small cabinets. The power supply connects securely to the switch to prevent the accidental removal of the power cable. A second power connection provides fallback power in the event that the power connection fails. The switch is able to automatically detect 10/100 Ethernet compatibility and can also auto-detect MDI and MDIX, eliminating the need for crossover cables.

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■ **Agilent** introduced a new multimode fiber-optic transceiver in a higher-speed 4Gbps small form factor and small-form-factor pluggable device that incorporates Agilent's internally developed integrated circuits and vertical cavity surface emitting laser technology. The company designed this product primarily to accommodate update-intensive online-transaction database applications, such as those used in the airline, insurance, and financial industries, to help handle the increase in the amount of electronic data in corporate environments.

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■ **Analog Devices** announced a 4X Fibre Channel transceiver that supports both Gigabit Ethernet and Fibre Channel data rates up to 4.25Gbps in SAN equipment. The 1x/2x/4x SFP chipset meets the requirements of the Fibre Channel Multisource Agreement specifications and is optimized for SFF-8472 digital diagnostics.

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■ **ATEN Technology** announced the availability of its newest product, the KN9116. This is ATEN's latest edition to its ALTUSEN line, a product line specifically designed for enterprise-class KVM solutions. The KN9116 is a 16-port IP-based KVM. Through cascading it can allow highly secure access to up to 128 servers. It features a built-in LAN port that allows admins admittance to any computer connected to the network. The KN9116 16-Port KVM is available for $2,499.99.

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■ **Avocent** introduced the eight-port CCM850, 16-port CCM1650, and 48-port CCM4850 console appliances for serial over IP data center management. The CCM devices provide secure serial over IP access to data center servers and serially managed devices. The CCM850 and CCM1650 feature 10/100BaseT support and IP forwarding, while the 48-port CCM4850 features gigabit networking support. Other features include RSA key-based authentication, SSH/Telnet host, extensive enterprise traps, server-based data logging, session sharing, and port history functions. Each model includes AVWorks software, which is compatible with Win2000/XP/98/NT, Red Hat Linux, and Solaris.

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■ **D-Link** claims its Super G with MIMO family of networking devices will significantly increase the range and performance of a new wireless network. Backward compatible with current 802.11b/g wireless products, the D-Link Super G with MIMO features D-Link's Smart Antenna. The Smart Antenna includes innovations such as beamforming, which lets users directionally focus the wireless signal at an angle toward the intended client. With beamforming, the wireless products function at the highest possible speeds and simultaneously provide a strong 802.11g signal for legacy products. The DI-624M retails for $149.99, and the DWL-650M retails for $99.99. Both products have a one-year warranty.

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■ **IDAutomation.com** announced its RFID Component for the Microsoft .NET Framework. The component uses custom .NET software applications to encode RFID tags on RFID-capable printers. If you use IDAutomation Forms Control, this solution will simultaneously print the barcode label and encode RFID tags. The IDAutomation RFID Component is also compatible with Visual Studio .NET, Borland C#, and Borland Delphi for .NET. It is also compatible with any RFID printer that has a Windows print driver. For a single-user license prices start at $199, while a royalty-free developer license costs $790.

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■ SMBs considering a migration to VoIP should take a look at **Kentrox's** new Q2400 QoS Access Router. The unit has dual T1 and Ethernet WAN ports, with an Add/Drop feature on the second T1 line to allow both PBX and VoIP signals on the same line. The $1,495 Q2400 also features DSL or Ethernet backup connectivity and support for up to eight VLANs.

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■ **Maxim Integrated Products** has announced the MAX6697 and MAX6698, a pair of seven-channel temperature sensors with an 8.5mm high x 6mm wide, 20-pin QSOP package. The MAX6697 can measure its own temperature, as well as those of as many as six external locations. The MAX6698 measures temperatures for three thermistors and three remote diodes. Alarm-output thresholds are customizable, and both new products have an operating range of 3V to 5V and incorporate an SMBus interface. Prices start at $3.75 (2500-up, FOB USA).

Maxim has also introduced the MAX6876, a quad-voltage power supply tracker and sequencer. This product monitors four voltages and is EEPROM-programmable. The MAX6876's features include I2C-configurable parameters for variables such as overcurrent limits, slew rates, and voltage thresholds. Undervoltage and overvoltage thresholds are adjustable in 10mV increments. The MAX6876 incorporates other features, including autoretry mode, overcurrent detect, and a reset circuit. Up to four devices can operate in master/slave mode, letting the MAX6876 track up to 16 voltages. Prices start at $6.39 (1000-up, FOB USA).

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PRODUCT ✦ RELEASES

■ USB plug-and-play technology is the crux of the NI USB-6008 and USB-6009, two DAQ solutions from **National Instruments**. The NI USB-6008's and USB-6009's small size and USB connectivity make the products suitable for environmental monitoring and data logging. National Instruments has included free data-logging software with both devices so users can begin taking measurements and gathering data right out of the box. Because both use a USB bus, users won't need to connect the NI USB-6008 or NI USB-6009 to an additional power source. LabVIEW or C users can also program either device, thanks to NI-DAQmx Base, a measurement services driver program. Prices for the units begin at $145.

MOBILE COMPUTING

■ **Intermec Technology** introduced the CN2 mobile computer, a small and lightweight commercial-grade PDA. The CN2 is durable enough for data collection in a range of in-store retail operations and is also small enough to work well in areas such as light-industrial operations. The CN2 features an Intel XScale processor and Microsoft CE .NET operating system. It also has a Cisco Certified Extension v1-compatible and Wi-Fi-certified 802.11b radio. A wired version is available for batch applications. Intermec's SmartSystem technology, a comprehensive system for complete device management, is incorporated into the CN2. SmartSystem makes installation, maintenance, updates, security adjustments, and device setting changes possible from a remote location to reduce downtime and increase efficiency.

MOTHERBOARDS

■ The MVME3100 is a single-board computer from **Motorola** that combines the company's MPC8540 SoC processor with a number of additional features to target applications such as image processing and industrial control. With low power consumption in mind, the MPC8540 combines the processor, memory, and PCI-X controllers, and limits power consumption to less than 7W. Motorola has included the following other features: 256MB or 512MB DDR ECC SDRAM and 64MB or 128MB Flash memory; a 66MHz, 64-bit PCI-X bus; and USB 2.0 and SATA interfaces. Motorola expects RoHS-compliant production to begin in September; prices start at $1,895.

NOTEBOOKS

■ **Eurocom** has introduced a desktop replacement notebook that features a choice of upgradeable video cards. The new EUROCOM D700T Enigma features an Intel Pentium 4 processor with speeds up to 3.8GHz. The video card is based on a 16X PCI Express architecture and has 256MB of DDR video memory. An optional second hard drive and a second optical drive are also available. The video card in the D700T is not proprietary and is upgradeable. The D700T offers a choice of three video cards at the time of purchase.

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■ **IBM** may have sold its desktop and notebook division, but the company has one final ThinkPad planned. The new T43 is based on Intel's new Sonoma platform. This Centrino update provides support for new technologies that include PCI Express, DDR2, and 802.11b/g or 802.11a/b/g wireless support. Support for Intel's new Graphics Media Accelerator 900 means low-end models will ship with integrated graphics. Alternative graphics options include an ATI Radeon X300 or an ATI Mobility FireGL V3200. In addition to its support for new technologies, the T43 also includes enhancements from IBM. In addition to Rescue And Recovery 2.0, the new T43 also includes Antidote Delivery Manager, a new tool that automates security updates. An optional fingerprint scanner further enhances security by allowing individuals to encrypt/decrypt files using their own fingerprints. The T43 will be available Feb. 25 with prices starting at $1,499. The T43p will be available in April.

PRINTERS & SCANNERS

■ **AML** has launched its upgraded M7100. This new wireless data collection terminal now features a 2D imager scan engine option. This will accommodate full 360-degree scanning, which means that it is not necessary to align the IR light directly on the bar code. The M7100 can be used to decode 1D linear codes, 2D stacked/matrix codes, as well as Postal bar codes. This device is specifically designed for use in industrial, shipping/receiving, postal, and document processing fields.

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■ **Metrologic Instruments** unveiled the MS1690 Focus, a handheld imaging bar-code scanner. The MS1690 uses high-resolution CMOS imaging sensors to produce high-quality images for multifunctional applications and Omniplanar's Swiftdecoder software to omnidirectionally decode 1D and 2D symbologies. The MS1690 Focus' 2D scanning capabilities make it suitable for applications such as parcel imaging, documentation, age verification identification, and the creation of personalized membership cards. The device also has an enlarged field of depth and stand detection that switches the MS1690 Focus into presentation mode when it's inserted into the stand. Metrologic has also included its CodeGate technology for on-command data transmission and menu style scanning.

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Ready For RFID?

IBM Helps You Integrate It

by Daniel P. Dern

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To help companies of all sizes incorporate data from RFID sensor tags into existing or new business software processes, IBM recently introduced its WebSphere RFID Premises Server middleware software for use on x86 processors running Windows, plus associated client software suitable for embedding in RFID readers, controllers, and other peripheral devices.

IBM's WebSphere RFID Premises Server can be connected to current or new in-store systems such as POS systems, supply chain management, inventory, and other RFID-enabled IT solutions. "The server lets you integrate business information back to the enterprise, such as what you've received or shipped, or where something is in the manufacturing line," explains Ann Breidenbach, director of strategy, IBM Sensor and Actuator Solutions.

The new software is the first product from IBM's recently formed Sensor and Actuator Solutions business unit.

Christine Overby, principal analyst for consumer markets at Forrester Research, comments, "More medium-sized enterprises need to begin their RFID efforts in 2005 because, for example, the second wave of Wal-Mart suppliers have to begin their pilots."

IBM products included in the RFID Premises Server include WebSphere Application Server, DB2 Universal Database software, WebSphere MQ Series, and Tivoli Systems Management middleware.

IBM also announced its new IBM WebSphere RFID Device Infrastructure, an embedded software product sold to companies that make RFID readers and controllers, as well as RFID-enabled kiosks and self-checkout devices. IBM currently partners with reader-makers including Alien, Intermec, SAMSys, and Symbol; companies which have already announced devices using the RFID embedded code include Arcom and Intermec.

"This is software based on open standards—J2ME on the embedded side, J2EE for the premises server, and Eclipse-based tooling," notes IBM's Breidenbach. The RFID Service integrates with WebSphere Business Integration products, WebSphere Portal, and WebSphere Product Center, which will help customers access applications made available by IBM Business Partners.

One company already using the new IBM RFID technology is Metro Group, the world's fourth-largest retailer. The company hopes to help automate its goods-receiving process, with goals such as eliminating stock-counting errors and avoiding "out of stock" and product expiration occurrences. According to IBM, Metro Group has integrated processes from 20 of its suppliers; another 80 suppliers are scheduled to be done in the coming year.

WebSphere Remote Server can be used to do remote monitoring and management of the RFID Premises Server.

WebSphere RFID Premises and WebSphere Remote Server are priced per processor. List price for the RFID server is $5,200 per processor. (IBM recommends a two-processor configuration for RFID implementations.) Companies that already have WebSphere Remote Server can add the RFID capability by purchasing the RFID Add-On for IBM WebSphere Remote Server. ℗

SNAPSHOT

IBM WebSphere RFID Premises Server

$5,200 per processor

IBM's new WebSphere RFID Premises Server software and associated embedded client let companies incorporate RFID data into their business software processes

(800) 426-4968
www.ibm.com

PRODUCT RELEASES

■ **Oki Data Americas** introduced its Color Signage Solution, which lets retailers produce a full range of professional-quality signage and other marketing materials on a variety of media in their store. This solution combines Oki Data's software applications, signage media, and digital color printers. The Color Signage Solution is based on two of Oki Data's high-end digital color printers: the OKI C9300dxn and C9500dxn. These printers provide high print speeds and 1,200 x 1,200 dpi and are developed with Single Pass ColorTM and Digital LED technology. To deliver consistent color accuracy, the Color Signage Solution uses advanced internal color matching software and ICC color profiles. Standard features of the printers are hard disk drives and duplex printing capabilities. These printers are compatible with a variety of media, including up to 203 gsm card stock, premium gloss paper, cling film, 4-up labels, table tents, and banner paper.

SECURITY

■ The new NA-0043 network appliance from **Axiomtek** can handle a range of security duties. Its firewall applications help protect internal systems while its VPN capabilities allow secure connections from those with permission to connect to the network. The NA-0043 supports LAN bypass and includes four Ethernet ports. Internally, the system sports a mini-PCI slot and an ultra-low voltage Intel processor that keeps operating temperatures low. Externally, the system includes a CompactFlash Type II slot and two USB 2.0 ports.

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■ **Barracuda Networks** introduced the Spam Firewall-Outbound Edition, a spam filtering application that scans outgoing email to ensure that users aren't spreading viruses or spam. Using scanning, filtering, keyword searches, and attachment blocking, the Spam Firewall can also prevent sensitive corporate information from leaking over the Internet. The Spam Firewall-Outbound Edition is designed for ISPs and enterprise organizations and helps them comply with regulations and policies regarding outgoing information. The application is available for a starting price of $1,399, depending on the number of users.

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■ **Bugopolis** announced that it can bundle Red Hat Enterprise with its hosting services and server appliances. Bugopolis also offers 1U-3U servers. According to Bugopolis, it has enhanced server security to the point that servers can operate outside corporate firewalls. Bugopolis also released the latest version of Bugzilla, the software publisher's defect tracking program. Bugzilla 2.18 includes chart, graph, report, and email notifications, as well as special tracking methods, including multiple authentication and wild-card matching.

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■ **Cyberworlds** has released a program to help make email safer called the Swidgets Email Xray. Email Xray looks at email in Microsoft Outlook to determine which messages may be attempts at phishing. This program avoids the possibility of being harmed by malicious code in emails by letting you view your emails as plain text. It also lets you see the email headers and see the source code of messages. Email Xray is compatible with Internet email and Microsoft Exchange and can be installed across a network. The network administrator can modify and disable features as necessary.

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■ **Datastrip** added three card/biometric readers to its DSVII family. All of the units weigh 2 pounds. The DSVII-SW reads 2D bar codes and OCR-B data from driver's licenses and ID cards; users swipe the card through the reader which has a 27mm capture area. The DSVII-PS boasts a 50mm capture area and handles OCR-B data and digital watermarks on driver's licenses and ID cards. The DSVII-PA has a 90mm capture area and can read digital watermarks and other info on passports. All of the devices can read data in short periods of time (as short as one second) and support expansion cards.

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■ The FortiGate-60M from **Fortinet** is a new network security platform that includes an analog modem for continued connectivity, plus a second WAN port for redundant broadband. The new FortiGate-60M covers antivirus, firewall, anti-spyware, intrusion detection, and other security bases.

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■ Security and messaging software vendor **GFI's** new product, GFI LANguard Network Security Scanner 6, is an update that takes into account new threats to today's networks. LANguard 6 watches for new USB or wireless connections to network machines. It also checks for new Linux vulnerabilities, including root kit detection, and is programmable via SSH scripts to check for problems on remote Linux and Unix machines.

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■ **McAfee** has introduced IntruShield for multilayered protection from spyware, adware, and other unsolicited and undesired programs. McAfee will release updates to protect users from the newest spyware threats as they are discovered. IntruShield first detects and then blocks suspicious activity and halts any programmed propagation, making it a useful tool for a company's network administrator.

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■ **Melior** has released Barbican RNP, software designed to protect networks from DoS attacks and Penetration Testing probes. Barbican RNP can protect a network in ways that a traditional firewall cannot. Rather than simply validate access to TCP/IP ports, Barbican RNP does not allow invalid packets into the network. Barbican RNP is priced at $18,000 in the United States and Euro 18,000 in all other countries, including Europe and Asia.

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Centralize Asset Management

NetSupport DNA HelpDesk Streamlines Several Tasks

by Will Kelly

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BEYOND HANDLING TECHNICAL support calls, the typical corporate help desk now serves as a focal point for PC management, asset inventory, and software distribution. An application centralizing these tasks is integral to a smooth-running operation.

To help IT manage this burden, NetSupport released its DNA HelpDesk v2.00, a PC and software management application offering user management, asset inventory, application management, and Internet metering features. It is part of the NetSupport DNA Asset Management Suite but is also available for purchase as a separate application.

The application catalogs typical user data including username, email, and other related information. It also stores detailed asset information, including maintenance and lease data. You also have the option to customize the PC and user information to meet the particular management requirements of your organization.

With the numbers of mobile and remote workforces increasing, asset management needs to extend beyond the walls of the corporate enterprise. NetSupport DNA HelpDesk v2.00 also gathers inventory data from remote users with its Add User tool.

NetSupport DNA HelpDesk v2.00 has features for managing hardware and software inventory. Software inventory targets the PC level, delivering a detailed summary of applications.

The program also includes an application metering feature, which identifies all applications running on the client PC. Additionally, the application metering feature catalogs the time duration, including start and stop times of the particular application. An added bonus of the application feature is that you can view information on the departmental level.

The Internet metering feature catalogs all Internet activity on the user's PC, including time duration they spend at a particular URL. Internet usage restrictions based upon time of day can also be set via this feature.

Distributing software from a central network location makes good business sense. NetSupport HelpDesk v2.00 offers a multi-delivery option for software distribution via a defined software package consisting of either a defined software package pushed to the user desktop or by recording and scripting user prompts required during the software installation routine.

While NetSupport DNA HelpDesk v2.00 is part of a larger software suite, it does face a bevy of competitors, including Remedy with its Magic Service Desk suite. Other competitors include Intuit's Track-It! asset management software and Altiris' Asset Management Suite. ▯

SNAPSHOT

NetSupport DNA HelpDesk v2.00

Three operators for $1,699; additional operators $400 each

Handles PC and user management tasks, including software distribution, asset management, Internet metering, and application metering

(770) 205-4456
www.netsupport-inc.com

PRODUCT RELEASES

SERVERS

■ **Carlo Gavazzi** is targeting customers in harsh environments with its 2U rackmount 794-series rugged server. The server boasts dual 2.8GHz Xeon CPUs and the Intel SE7501WV2ATA ATX motherboard, although Carlo Gavazzi can install half-size motherboards. The server also includes a front circuit breaker, a 350W PSU, a PSU fuse, and a hinged panel that lets users install hard drives, floppy drives, and optical drives. The cases, which measure 2U inches high x 19 inches wide x 20 inches deep, have shields that meet MIL-STD-461E and TEMPEST requirements. They are also RTCA/DO 160D, MIL-STD-901D, and MIL-STD-167 compliant and have a heater/cooler system that boasts two 44 CFM fans, and heats the system in temperatures as low as 40 degrees Celsius.

SOFTWARE

■ **Avocent** announced the latest addition to its DS Series, the DSI5100. This IPMI (Intelligent Platform Management Interface) provides a new way to securely monitor and manage IPMI-enabled servers. The DSI5100 integrates Avocent-embedded IPMI products with its existing data center products to make an easy-to-use and thorough system for managing today's servers. This device features the DSView 3 software package. This is a single-interface package for managing IPMI, KVM, and serial and externally managed power connections. It is a fully redundant replicating solution. This allows administrators to have secure browser-based control of servers, serial devices, and DSUs (Data Service Units).

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■ **Citrix Systems** and **SAP America** have partnered to deliver SAP Business One and Citrix MetaFrame Presentation Server for SMBs. SAP Business One is a software package that manages application information such as general ledger and banking activities, customer service, sales, as well as inventory operations. The MetaFrame Presentation Server allows SAP Business One-enabled systems to deliver the same business intelligence to mobile and remote branch office users, quickly and securely.

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■ **Computer Associates** announced the Unicenter Desktop DNA r11, which is designed to ease the upgrade process. The Unicenter Desktop DNA r11 captures application settings, system settings, user profiles, and data and migrates them to the upgraded machine. The software takes an incremental capture of users' PC information and features remote troubleshooting and restoration, as well as alternative Apache Web server and Network Appliance server storage options. The Unicenter Desktop DNA r11 is available for $22 per node for 100 nodes.

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■ **ExclamationSoft** announced the release of WebWatchBot 3.0. WebWatchBot 3.0 is Web-site availability and performance monitoring software that can alert companies of errors, poor response time, and other problems for multiple URLs via email, on-screen display, or cell phone. A new Scheduler feature provides greater report capabilities and improved maintenance window schedules for watch items.

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■ **FaxCore's** new FaxCore 4370 software installs easily on the desktop and interfaces with third-party applications to provide simple and convenient fax capabilities. The fax server software is based on Microsoft's .NET and includes tight Microsoft Office integration. Not only can FaxCore 4370 manage incoming and outgoing faxes, but it can also archive faxes for later retrieval. Support for a bar code routing module lets businesses route faxes to the correct individuals without the need for separate fax numbers for different employees. Prices start at $1,995.

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Sunbelt CounterSpy Enterprise

New Tool Helps IT Managers Fight The Spyware Battle

by Joe Pasquini

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SPYWARE IN THE WORKPLACE has become a security concern for countless IT managers. User workstations become infected, and performance and productivity can suffer. Additionally, confidential employee and corporate information can be compromised. Sunbelt Software, a provider of Windows security solutions, has released CounterSpy Enterprise to help system administrators counter the spyware threat.

"CounterSpy Enterprise was designed to make it painless for IT managers to rid their company of spyware, combining next-generation system management architecture with a powerful spyware-scanning and remediation engine," said Alex Eckelberry, president of Sunbelt Software.

CounterSpy features a central management console that gives administrators the ability to access and control agent deployment, update threat databases, quarantine spyware, push agent policies, and schedule scans.

Deployment throughout an organization is accomplished via a policy-based interface. Agents can be deployed using a silent push install (using either WMI or RPC and admin shares) as an MSI file or as a self-extracting executable.

CounterSpy Enterprise's agent-scanning engine automatically scans workstations on which it is installed for spyware threats. Agents report on spyware to the central server, providing information about the spyware, assigning a threat level, and allowing the administrator one of four recommended actions: Ignore, Report Only, Quarantine, or Delete. Default actions are also configurable. The scanning engine uses a threat signature database that includes updates from Sunbelt, as well as input from a network of users who report on new spyware outbreaks to Sunbelt through the consumer version of CounterSpy.

Leveraging Crystal Reports, CounterSpy Enterprise includes seven predefined reports, as well as the ability to generate custom ones. Predefined reports include: Executive Summary, Infected Machines Detail, Infected Machines Summary, Machine History, Threats Found Detail, Threats Found Summary, and Top 10 Infected Machines.

CounterSpy Admin Console and Policy Server supports Windows 2003 Server, WinXP Professional, Win2000 Server with SP3, and Win2000 Professional with SP2. It requires at least 200MB free disk space, 512MB RAM, and MDAC 2.6 or higher. The admin console requires Internet Explorer 5 or higher and MS .NET Framework 1.1.

The CounterSpy Workstation Agent supports WinXP Professional/Home and Win2000 Professional SP2 systems. Agent support will be added for WinNT 4 Workstation (SP6) and Win98SE/Me in the near future.

Competitive products in this market segment include Webroot's Spy Sweeper Enterprise, Computer Associates' eTrust PestPatrol, and Omniquad's Antispy Enterprise. In addition, McAfee is expected to release an add-on module to VirusScan 8.0i sometime during Q1 2005, and Microsoft recently acquired Giant's AntiSpyware, which is now available as a beta download.

Pricing starts at $255 for a 10-pack machine license. Volume discounts are available based on a sliding scale.

> **CounterSpy Enterprise's agent-scanning engine automatically scans workstations on which it is installed for spyware threats.**

SNAPSHOT

Sunbelt CounterSpy Enterprise

From $255; additional discounts available

Fight spyware from a central management console

(888) 688-8457
www.sunbelt-software.com

■ **Insiderscripts** announced its latest project, the SEO Detective. This new software is designed to allow Webmasters to get comprehensive information on their Web sites. The SEO Detective automates the process of researching the level of a Web site's promotion, allowing the user to collect data, statistics, analysis, and performance measurements on their Web sites and on their competitors' sites. This software is available for $67.

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■ **Intergraph** introduced Smart-Sketch 5.0, a new version of the company's parametric design, production drafting, and diagramming software. This version has new features including Line Style Editor, expanded interoperability, Image Integrator enhancements, and more.

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■ **NetSupport** has introduced NetSupport DNA 2.1 for managing computer assets, improving software-inventory tools, and includes enhancements for the application packager and query tool. It also adds a new UI, new Internet-metering settings, and DNS support. The program's key features are software and hardware inventory, software distribution, application and Web metering, query-based reports, a Web-based help desk, and remote-control functions. According to NetSupport, implementation takes only a few hours.

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■ **Sun Microsystems** announced the Sun Compliance and Content Management Solution, a system that integrates Sun's storage and compliance products, the expertise of its client solutions organization, and the Solaris OS with compliance software from AXS-One: all to help organizations maintain compliance for electronic records. This product includes the Solaris 10 OS, Sun StorEdge SAM-FS, a single Web-based search screen, interoperability with all classes of data/records, and more.

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■ **Tethys Solutions** announced the latest version of Automation Anywhere 2.0, an automation program. Automation Anywhere lets users create scripts via wizards. Users can turn scripts into EXE files. Administrators can use the software to automate IT functions. The software includes SMART, a feature that adjusts the EXE file in real time. Automation Anywhere 2.0 is available for $109.95. Tethys also offers the Premier License, which lets admins extend the EXE files on 100 clients, and a three-month On Demand license; there is also a trial version. The software is compatible with Windows NT4/2000/2003/XP.

STORAGE

■ According to **McDATA**, the Intrepid i10K is the industry's first backbone director developed for the core of global enterprise data centers. With support for dynamic network and end-to-end partitioning from application to array, the Intrepid i10K lets IT managers establish secure SAN islands and large fabric consolidations; the product is also scalable as McDATA looks to future innovations, such as virutalization. Other features include 256 nonblocking ports, native 10Gbps ISLs, and FlexPar technology. FlexPar provides hard networking partitioning, which is essential for complete firewalled traffic separation. The Intrepid i10K will be available sometime during McDATA's first fiscal quarter (February to April).

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■ Starting in March, optical library vendor **Plasmon** will build its Enterprise D and the D-Series libraries with Panasonic 9573 Multi Drives. These drives can write to DVD-R/RW, CD-R/RW, and DVD-RAM formats, but not to DVD+R or DVD+RW. Plasmon claims top write speeds of 5X DVD-RAM and 8X DVD-R; the latter is equivalent to 10.8MBps.

Email Archiving Made Simpler

Sherpa Archive Attender For Exchange Lets You Banish The PST File

by Daniel P. Dern

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ARCHIVE ATTENDER for Exchange from Sherpa Software provides add-on automated email archiving and search features, moving critical data out of Microsoft Exchange PST files (Outlook Personal Folders) and into a secure external device such as a file server, NAS, or SAN to help companies reduce storage, secure information, and comply with regulatory requirements.

"For most administrators, the PST files that Outlook lets users create on their local drives have been the bane of their existence," comments Balaji Srinivasan, product manager at Sherpa. "PST files grow uncontrollably, and administrators have no access to them."

In the new version of Outlook, PST files have a 2GB limit and, Srinivasan reports, "Administrators would find that when a user reached that limit, the PST file got corrupted and couldn't be recovered. Archive Attender lets users stop using PST files as a means to archive their messages. Instead, Outlook users can save email directly to centrally managed archives."

Unlike other, more enterprise-oriented email archiving solutions that are dedicated appliances, Archive Attender for Exchange is hardware-independent, running on any server or dedicated desktop (Win2000 or higher), and works with Exchange 2000 and 2003.

The new version 1.1 of Archive Attender for Exchange offers improved file archiving, indexing, and searching capabilities. For example, archived email can be searched by message age or size. Also, message bodies and attachments are now searchable, whereas version 1 could only search message headers.

Users are now able to search archived email, and administrators can define user permissions for searching archived data.

"The product is almost entirely administrator-driven," notes Srinivasan. "It's a rule-based architecture—for example, 'Move all messages more than five years old to the archive.'"

The new rule capabilities also make it possible to address regulatory compliance concerns. Srinivasan says, "In a compliant archive, you may want to prohibit users from reading or deleting archived messages, while an archive done purely for storage may permit this."

For companies who have already deployed an email archiving solution but still have older email archived in PST files, Archive Attender for Exchange can be used to move the email from those PST files.

According to Sherpa, Archive Attender for Exchange is intended primarily for small to middle-market customers; its average customer is in the 500- to 1,000-mailbox range. Archive Attender for Exchange can archive to devices including file servers, NAS, and SAN, but not yet to tape drives or to "burners" or other devices requiring third-party software.

Pricing starts at $15 per user; volume discounts are available. (A 10-mailbox 90-day free trial version is available for download.) ▣

SNAPSHOT

Sherpa Software's Archive Attender For Exchange 1.1

Starting at $15 per user; volume discounts available

Improves email archiving and searching for Exchange/Outlook users

(412) 206-0005
www.sherpasoftware.com

SATA Meets NAS

Procom's Low-Cost NetFORCE 900 Filer

by Joseph Pasquini

· · ·

DUE TO THE SUBSTANTIAL GROWTH of data within organizations, and the need for a rapid and cost-effective response, the demand for NAS solutions has increased during the past several years. Procom, a familiar name in the NAS appliance arena, recently introduced the NetFORCE 900 filer. Targeted at small and medium-sized businesses and work units, this latest entry into the company's NAS product lineup is designed to offer a higher storage density and lower cost per gigabyte, thanks to its reliance upon Serial ATA disk technology.

"I have not seen so much customer demand for a Procom NAS product in the last two years, and we are receiving increased pressure from our customers to fill backorders for the NetFORCE 900," said William A. Long, Procom's vice president of product development. "This is a true milestone product for us and, we believe, for the NAS marketplace."

> The NF900 is capable of up to 4.8TB of storage in its 3U form factor and is intended to be used for primary and secondary storage.

The NetFORCE 900, which is based on the Intel Xeon platform, features built-in hardware RAID with a battery-backed cache, as well as hot-swappable disk drives and power supplies. The NF900 is capable of up to 4.8TB of storage in its 3U form factor and is intended to be used for both primary and secondary storage. An optional UPS is also supported. RAID and system management are provided by a Web-based GUI that allows for remote administration and system monitoring.

In addition, the NetFORCE 900 makes use of the same OS found in Procom's high-end NAS devices. It features such advanced functions as a journaling system for ensuring data integrity and checkpoints for rapid recovery of damaged or deleted files. Other features include heterogeneous file sharing across different types of platforms, SNMP monitoring, local SCSI backup options, and support for NDMP (v2 and v3).

Procom also offers ProMirror, a disaster-recovery software product, as an option to its NetFORCE customers. ProMirror integrates with the NetFORCE operating system and allows a near-real-time mirror of a company's mission-critical files to be maintained at a remote location. Many 24/7 operations are looking for a quick and simple method to back up and restore their data without affecting the performance and availability of their continuously running systems. By off-loading tape backup to a mirrored system, the source system's performance is not impacted.

SNAPSHOT

Procom NetFORCE 900

Starting at $9,995

SATA-based NAS device offering low per-gigabyte cost for small to medium-sized businesses

(800) 800-8600
www.procom.com

Competition in this market space is accelerating thanks to the availability and savings of SATA-based technology. Other SATA products in this market space include offerings from IronPC, DNF, and InoStor, just to name a few. ▣

PC Marketplace Continues Its Upward Trend

EACH WEEK, MarketWatch gives you a quick look at what's happening in a particular product market so you can make better decisions for your company. We interview industry analysts, product manufacturers, and other experts and combine their comments with the latest statistics and market outlooks for a well-rounded perspective. This week's focus is on PC systems.

by Sixto Ortiz Jr.
• • •

YOUR BUSINESS NEEDS DESKTOPS, laptops, and workstations so your employees can get work done. All the high-end back-office technology in the world will do you no good if your employees are slogging along with underpowered systems that can't run your important applications.

After the economic challenges at the beginning of the decade, the systems marketplace is recovering and poised for further growth in 2005. Businesses that delayed upgrades during 2002 and 2003 began that process anew during 2004. Let's take a look at the marketplace for desktops, laptops, and workstations and see what's happening in this important area.

Poised For Growth

Market analysis firm IDC predicts 10% worldwide growth for the PC marketplace during 2005. According to IDC's statistics, PC sales growth in the worldwide commercial marketplace will slow from 15.9% in 2004 to 11.3% in 2005. Although sales growth is predicted to slow during 2005, the continuation of double-digit growth in the commercial segment of the PC marketplace is encouraging for manufacturers such as Dell, HP, and Gateway.

In a December 2004 press release, Loren Loverde, director of IDC's Worldwide Quarterly PC Tracker, says, "Despite the relatively weak consumer market, commercial and portable demand continue to drive growth."

This spike in demand for PCs during 2004 and 2005 makes sense: The economic turmoil during the beginning of the decade ushered in a wave of cost-cutting in businesses. One of the areas where cost-cutting is easily done with minimal pain is in system upgrades. Many businesses simply delayed needed upgrades until financial results improved.

IDC's survey methodology includes desktops, laptops, ultraportable, and x86 server unit shipments under the PC umbrella.

Dell In The Lead

The worldwide PC marketplace grew at a healthy 13.7% during the fourth quarter of 2004, according to IDC's January 2005 Worldwide Quarterly PC Tracker market figures. The main beneficiary from this increased spending was Dell, which regained the top worldwide market share spot. Gateway, which completed its acquisition of eMachines in March 2004, also benefited by posting an impressive 107.5% increase in its U.S. PC shipments during the fourth quarter of 2004 over its shipments during the fourth quarter of 2003.

Apple's increasing momentum is another noteworthy marketplace event. During 2004, Apple benefited from its increased visibility among consumers—thanks, iPod—and parlayed that publicity into a 15.6% surge in U.S. PC shipments. Still, the company's U.S. market share remains a paltry 3.3%, so it remains to be seen if Apple's PC market share will see significant improvement during the coming months.

No XP For Itanium

In a recent announcement, Microsoft announced it is halting development of a 64-bit version of WinXP designed for workstations powered by Intel's Itanium 2 chip. Instead, Microsoft announced it will focus its efforts on promoting the use of its Microsoft Server 2003 x64 and Windows XP Pro x64 in workstation platforms based on 64-bit x86 systems, such as AMD's Athlon 64 and Opteron CPUs and Intel's Xeon processors with 64-bit extensions.

Industry watchers are generally not surprised by this announcement, since Intel intends to aim Itanium 2 at the mid- to high-end server marketplace. This announcement certainly bodes well for AMD, which can now concentrate its 64-bit efforts squarely on the low-end server and workstation marketplaces.

SMBs Get Attention

A June 2004 Yankee Group research report indicates major infrastructure vendors are poised for a full-court press to capture significant market share in the SMB marketplace. This trend, writes Yankee Group analyst Michael Lauricella, is partly driven by a decrease in enterprise infrastructure spending. Major manufacturers are simply following the money, and right now the opportunities for greatest sales growth lie in the SMB marketplace.

The proof is in the amounts of money that major IT companies are spending to develop and promote products designed for the SMB marketplace. As evidence, Lauricella points to various initiatives recently launched by market stalwarts such as HP, IBM, and Microsoft. For example, HP recently launched a $750 million SMB campaign, and Microsoft is planning to spend a staggering $10 billion on SMB products and services.

A July 2004 Yankee Group Research Note detailing key laptop and desktop PC purchasing drivers for SMBs shows that even though price is still the primary consideration for SMBs, brand name and manufacturer reputation also count a great deal. SMBs are also concerned with a product's ease of integration with existing IT network infrastructures: SMBs don't want to purchase systems that will prove troublesome in their environments.

An interesting finding in this Yankee Group survey is that very small businesses plan to increase their laptop purchases even as their plans for desktop purchases decrease. This finding clearly indicates small businesses are increasingly taking advantage of solutions that enhance employee mobility.

Building Momentum

The systems marketplace is poised for growth during 2005, especially within the SMB market segment as the major manufacturers pay increased attention to this area. But, the momentum may not continue forever, as economic conditions could change for the worse and cause the marketplace to revert to the single-digit growth conditions seen early in the decade. For the moment, SMBs can expect to see increased competition, cheaper prices, and more sophisticated hardware as the major manufacturers vie for their stake in the important SMB marketplace. ▢

PC Market Trends

Worldwide Growth In PC Shipments, 2002-2005
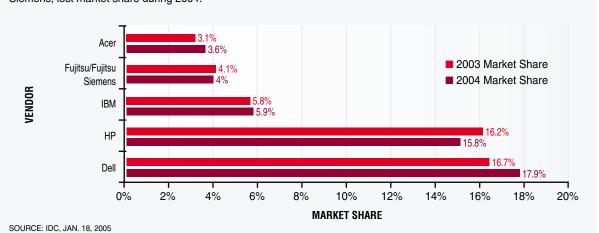
Even though IDC forecasts that growth in worldwide PC shipments will decrease from 2004 to 2005, the growth figures are still encouraging for a PC marketplace recovering from the anemic growth seen earlier in the decade.

	Consumer	Commercial	Total
2002	3.3%	1.2%	1.9%
2003	13.6%	11%	11.9%
2004	12.1%	15.9%	14.5%
2005	8%	11.3%	10.1%

SOURCE: IDC WORLDWIDE PC TRACKER, DECEMBER 2004

Top 5 Vendors, Worldwide PC Shipments, 2004

Dell gained 1.2 percentage points in worldwide market share in 2004, propelling the Austin-based company to the No. 1 position. The other four companies all posted much smaller market share changes; some, such as HP and Fujitsu/Fujitsu Siemens, lost market share during 2004.

Vendor	2003 Market Share	2004 Market Share
Acer	3.1%	3.6%
Fujitsu/Fujitsu Siemens	4.1%	4%
IBM	5.8%	5.9%
HP	16.2%	15.8%
Dell	16.7%	17.9%

SOURCE: IDC, JAN. 18, 2005
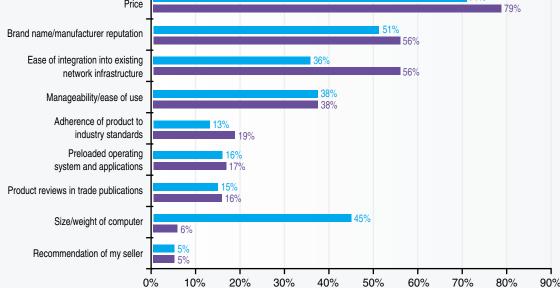
SMB Purchasing Factors

Even though price is still the primary consideration for SMBs shopping for desktops and/or laptops, the brand name and reputation of the manufacturer are also very important factors.

Factor	Laptop	Desktop
Price	71%	79%
Brand name/manufacturer reputation	51%	56%
Ease of integration into existing network infrastructure	36%	56%
Manageability/ease of use	38%	38%
Adherence of product to industry standards	13%	19%
Preloaded operating system and applications	16%	17%
Product reviews in trade publications	15%	16%
Size/weight of computer	45%	6%
Recommendation of my seller	5%	5%

SOURCE: THE YANKEE GROUP 2003 SMB INFRASTRUCTURE SURVEY (UNITED STATES)

OPINIONS
DATA • DEVELOPMENTS

Heat, Hardware & Decapitated Mice

This week has been spent getting my Christmas present (to me) working. You would think that installing a faster Intel processor on an Intel motherboard would be fairly easy. It wasn't.

I've been building my own systems since the mid-'70s when I brought home my first system in kit form. In those days, we were constantly fighting heat as the S100 "architects" decided to provide unregulated power to the motherboard. This meant that every system board had to include one or many 7805s to regulate the PDC 8-volt supply down to 5-volts DC. That, coupled with the fact that the memory boards were populated with 2102 RAM chips (1KB x 1, so 32 chips for a 4KB card) meant that the heat generated by the boards was enough to keep the oil flowing in a '57 Buick's engine block on a cold winter night. Well, I had not had any real problems with heat since the

up. It came bundled with a (shall we say) less-than-desirable motherboard that I put up for adoption. My troubles started when I found my Intel 875 motherboard did not support the Prescott. I just assumed that it would, as the newer processors arrived not long after I bought the board. I was just waiting for them to get affordable. Nope, Intel's planned obsolescence made my board unable to see the new CPU. Sigh.

I froogled around and decided to get another motherboard designed to support Prescott and the other features I needed. I plopped down another $100 on top of the $208 for the CPU. My "cheap" upgrade was getting expensive. I made the mistake of believing the salesman and bought a "deadly serious" ATT HPS-P4 CPU cooler. After installing the motherboard, a task that I could teach my daughter George, who has a master's degree in civil engineering, I noticed the fans were

William (Bill) Vaughn is an industry-recognized author, mentor, and subject-matter expert with more than 30 years in the computing industry as a developer, manager, trainer, marketer, and writer. After 14 years at Microsoft, Vaughn stepped away to work on his new books, in addition to mentoring and leading training seminars. He's written six editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and two editions of "ADO.NET and ADO Examples and Best Practices for Visual Basic Programmers." He and Peter Blackburn just finished "Hitchhiker's Guide to SQL Server 2000 Reporting Services."

^ BIO NOTES

> **Remember that dust is more conductive when it's wet, so if your systems fail as the humidity goes up, you might just have a dirty system.**

PC industry went to regulated power supplies—at least nothing that couldn't be dealt with. Until now.

Trying For A "Cheap" Upgrade

When I saw the chance to get a Pentium 4 Prescott (3.2GHz, 800GHz FSB, 1MB L2 cache) to replace my 2.2GHz P4, I snapped it

running at capacity. The system sounded like a Cessna 180's pre-takeoff run-up. When I watched the CPU and internal temperatures go over the red line (and the alarms go off), I went back to the Web to look for a better way to cool the processor.

Intel was no help. Its online (via email) support staff said to set the thresholds to

70° C and forget it. They also said that the two case fans should both blow into the cabinet. Huh? I guess they wanted me to buy another CPU once this one burned up. I finally found an award-winning Zalman CNPS7000B-Cu "Ultra-Quiet" CPU cooler and installed it. I was out another $40 plus tax. Fortunately, the temperature dropped dramatically and the system runs at a "cool" 46° C. The fans are running at less than half speed, but I was out $348 plus tax and the time to install it all. Not so cheap after all.

Spring Cleaning & Gardening

I found something else when I started the upgrade process: dirt. My dev system was clogged with dust. The old CPU heatsink and every leading-edge in the system were encrusted with dust. Yuck! The system looked like something out of a cheap Halloween movie. This dust, which is pretty common outside of a clean-room environment, sticks to the inner-workings of our systems like glue. If you look into your system, check to see if the leading-edges of the fan are coated with a brown layer of greasy gunk. If so, the inner workings are also probably covered with the stuff.

Open up the system (after you power it down) and use one of those $2 cans of air to clean it out. Plan to revisit the inner workings a couple of times a year—or when it starts smelling strange. This is also a good time to reseat all of the cards and connectors. They have a tendency to walk out of their sockets as they heat and cool. Remember that dust is more conductive when it's wet, so if your systems fail as the humidity goes up, you might just have a dirty system.

Killing Mice & Strangling Cats

As I was relaxing and feeling quite proud of myself, my cat Ink snuggled up against my laptop. She likes it when the mouse cursor moves around the screen. She's also fascinated by the red glow of the IR mouse—to the point that she decided to bite off its little head. Sigh. It was a nice mouse. I buried it in the backyard with her other kills. That makes six mice, two rats, four birds, and a retractable-cord SQL Server 2000 commemorative mouse.

Send your comments to bill@processor.com

OPINIONS
BENT • ON • STORAGE

Go Ahead, Waste Away

■ Every so often I get the urge to get down on the floor with my toolbox and commence screwing up my storage. I can spend days ruining and then fixing things that needed no intervention whatsoever. The main thing I discovered this go-round was how much I appreciated a Promise ATA RAID adapter I purchased. For about a hundred bucks, it delivers the goods in a straightforward, unambiguous way—and when it comes to BIOS-level monkey business, it's definitely a plus to have a clue.

After a Silicon Image RAID card zombiefied one of my drives in a mirroring pass, the Promise adapter was able to bring it back to life by seeing it as a target and mirroring data from a good drive onto it. For what it's worth, my little zombie disk was not visible under Win2000 or Partition Magic, and a Highpoint RAID card wouldn't recognize it either. I never would have expected to use a RAID card to resuscitate a funky drive, but it did. If I had more machines in my office, I would definitely stock them with Promise cards.

The best thing about the Promise card was its BIOS-level utility, which clearly identifies connected drives and the things you can do to them, such as indicating which drive is the source and which is the target when creating a mirror. By comparison, I was disappointed to discover that a similarly priced Highpoint RocketRaid adapter in a different system didn't identify either source or target prior to mirroring drives. Still, you'd have to be an idiot to mirror something backwards—wouldn't you? Like creating a mirrored pair and copying the contents of a blank drive over an existing boot drive. Hmmm, this was definitely another case of the protein robot malfunctioning, but I'd like to thank Highpoint for the assist. Three cheers for working backups.

Buying disk drives has never been more confusing. There are many different interfaces and many different capacities, but the technical details are nothing compared to the rebate minutiae. I think Hitachi, Maxtor, Seagate, and Western Digital all have perpetual rebate programs that I've used, but I don't know whether I can go back to the well. The drive manufacturers should create an amnesty program so rebate-challenged people like me can live without anxiety. If there is one thing that tips my scales, it's processing all that rebate confetti only to find out six weeks later that it couldn't be processed for some reason clearly stated in the six-point print. BTW, I wonder how many of the 400 emails that hit my inbox every day result from the email address submitted on rebate forms. Could I get that broken down into rebates that were accepted and rejected?

With disk drive capacity being so blasted huge, I found myself having difficulty justifying that much capacity for my applications: Thunderbird email, Firefox and Opera browsers, OpenOffice word processing, E-music purchases, and QuickBooks. But I'm a storage junkie and my life is incomplete without new drives, so I needed a rationalization. This year it was speed.

Understanding disk drive performance involves a little bit of rotational physics and radial geometry. Data is located on disk platters using a modified radial coordinate system of tracks and sectors, where the tracks are concentric rings

MARC FARLEY

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> ## Understanding disk drive performance involves a little bit of rotational physics and radial geometry.

and sectors are subdivisions within the tracks. Drive performance depends partially on how fast the data moves past the heads. If all tracks move at the same speed—and they do because the platter is rigid—then it follows that data in longer tracks move faster than shorter tracks. A simple mathematical way to say it is that the speed is proportional to the track's radius length. Data bits on the outer edges of a disk platter move much faster than those on the inside. Zone-bit recording stuffs more data into larger tracks, making the whole thing work as planned.

So, I short-stroke most of my new drives now. The idea of short-stroking is to create a single partition less than half the raw capacity of the drive, restricting its use to the fastest tracks and reducing seek times. The resulting disk performance is far better than a normal drive configuration. FWIW, I think "disk slop" drags on the performance of most Windows systems due to the way Windows operating systems use disk. Short-stroking tightens things up.

You could argue that it's stupid to throw away half the disk capacity, but I think of it as performance tuning. Besides, if you need it down the road, the unused capacity can always be turned on. But then again, that might be a signal to install an even-larger disk and short-stroke it, maintaining the improved preferred performance levels you crave. ▣

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Is Autonomic Computing Ready For SME Prime Time?

by Bruce Gain

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IT WOULD BE HARD to find an IT admin who would not welcome the day that systems would run themselves. If IBM and its partners have their way, automated computing will do just that—but small to medium-sized businesses will only gradually benefit from the concept's application.

Autonomic computing is largely about performing network administration tasks with less staff. While staff reductions are, of course, not something network admins necessarily think is a good thing, autonomic computing will ideally free up network managers' time. IT admins can thus devote more of their energies to planning what they want their networks to do, minus many of the mundane tasks (read: grunt work) that they must face every day.

A network would manage itself by automatically installing new components, checking for new upgrades, optimizing the network by reconfiguring network parameters, and self-diagnosing and automatically healing the network's layers when glitches occur. IBM likens the concept to the human body, which automatically regulates its temperature, heart rate, and other functions while freeing up the conscious brain for other tasks.

The History

IBM introduced the concept of autonomic computing in 2001, announcing that it would eventually enable networks to automatically self-administer most of the tasks that represent much of the mundane work of IT admins. In 2003, IBM and Cisco formed an alliance to co-develop self-diagnostic and self-healing systems. Subsequent to the announcement with Cisco, self-diagnostic and self-healing standards were developed on which autonomic computing tools are based.

> ### Don't expect a great bombshell of automated computing to transform your network in the near future.

The self-diagnostic capabilities of automated computing represented the first step in the roadmap. "Once you know what the problem is, applying a cure is not as difficult. Sometimes finding the problem, especially when it involves different layers of the IT stack, is very difficult," says Ric Telford, director of technology and architecture for IBM's autonomic computing division. "Automatic, algorithmic-based correlations and root cause analysis will replace what is [otherwise] a week-long exercise with six or seven administrators huddled in a room over a log file."

IBM now incorporates automated computing in its middleware offerings and services. The company also makes automated computing tools available to third-party middleware providers without charging licensing fees.

What SMEs Can Expect

Don't expect a great bombshell of automated computing to transform your network in the near future. Middleware developers, using IBM tool sets, will only gradually add automated computing into existing applications. "I don't think [SMEs] are going to wake up today and say, 'Wow, my system is autonomic.' I think it is going to be a gradual move to the latest technologies of their middleware, like systems management software such as Tivoli, DB2, and WebSphere applications services," Telford says. "Before they know it, they are going to say, 'It has only taken me one person to keep this stuff up and running, and I used to have three people.' "

Specifically, most of the autonomic computing capabilities available now for SMEs focus on the basics, such as optimization of a database, restarting a server, and similar tasks, says Audrey Rasmussen, an analyst for Enterprise Management Associates. "In addition, there are also products that focus on IT process automation—not the broad sweeping automation of process across IT, but more for the contained types of processes," Rasmussen says.

For the rest of the year, SMEs can thus expect similar autonomic capabilities for fundamental tasks to turn up in middleware, while the application will still likely lend itself to more ambitious functionalities, as well, Rasmussen says.

"We'll see autonomic functionality developed in other devices and disciplines. This also depends heavily on adoption of automation by IT organizations," Rasmussen says. "If users aren't adopting it, vendors will not aggressively develop more automation functionality quickly. I do anticipate that we will see more integration, which is very complementary and enabling of automation."

Case Studies

SMEs will thus benefit from automated computing in such a way without shaking up existing network infrastructures. The applications will thus become available within LAN network software and tools that are already in use and with which IT admins are familiar.

For middleware provider Singlestep Technologies, the goal is to develop automated computing tools to offer service providers ways to help reduce their customers' specific IT admin tasks, says Ophir Ronen, CTO for Singlestep.

"Typically, in small to medium-sized businesses with 10 to 20 servers, customers might turn to the service providers for a box that can do the monitoring of that customer's infrastructure or tools that can do the [monitoring] task with the existing management system," Ronen says. "We have used automated computing to pull in IBM's AME (autonomic management engine) with our Unity [offering] and added it in a resource model that we developed jointly with IBM that offers root cause analysis. By enabling AME and Unity to work together, the service providers can provide root cause analysis for the events that are flowing on their customers' networks."

The topological event correlation that automatically determines the root cause analysis of system events thus dramatically reduces the time needed for a complicated task that an IT admin would otherwise manage, according to Singlestep. The root cause analysis is also helpful for signaling network anomalies such as worm infections, the company says.

What IBM Wants

After painting a pie-in-the-sky picture of what autonomic computing may one day do, the IBM-centric concept is also about making IBM products and services easier to use for the IT admin.

"It is easy to miss the fact that Big Blue is also doing essential 'boring' work by driving an aggressive product rationalization that will make all of its platforms more manageable," says James Governor, an analyst for Red-Monk. "Seen in this context, autonomic is not about hype—it's about portfolio simplification, with common models for error handling, monitoring and system automation, and so on and reintroducing a more formal, architectural view to the ongoing management of computing."

Autonomic computing thus involves hardcore engineering across legacy platforms, although it does represent a new technology, Governor says. "IBM doesn't just want its newer platforms to be autonomic, but it wants them all to be. Getting the basic underpinnings right is more important than any new whiz-bang technology."

IBM Autonomic Computing's Ultimate Goals

IBM's autonomic computing initiative remains in the nascent stages since its introduction in 2001. Now, flavors of autonomic computing are embedded in middleware offerings, which will gradually expand to assume tasks that otherwise require IT staffers to administer. Some of the automated tasks include:

- Self-diagnosing and automatically healing network layers when glitches occur
- Installation of new hardware and software components
- Checking for new upgrades
- Optimization of the network by automatically reconfiguring network parameter
- Network protection against intrusions

Don't Get Hooked By Phishing

Protect Your Network & Users From Scams

by Tony Bradley

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PHISHING WAS ONE of the big buzzwords in network and Internet security in 2004. These digital anglers mass-distribute their bait to millions of people in the form of email messages designed to appear as if they are from well-known, legitimate companies.

One of the hallmarks of 2004 when it comes to malicious code was the convergence of different types of malware, as virus writers joined forces with spam distributors and purveyors of phishing scams. The result was a tremendous increase in both the volume and quality of new threats. Email security firm MessageLabs noted almost a ten-fold increase in the number of phishing scam emails they intercepted from June to July of 2004, and the number stayed up the rest of the year.

What It Means For Your Network

Much of the media coverage of phishing scams has focused on individuals and the companies being spoofed by the scams. The phishing scams primarily target financial institutions in an effort to trick victims into unwittingly surrendering their username and password for their accounts, granting the attacker access to the victim's money.

To maintain the credibility of their names and in the interest of customer service, the institutions being spoofed have absorbed the costs of reimbursing the victimized users, even though they have virtually no part in protecting the users.

How big of a problem does phishing represent to an enterprise? "Huge," says Stuart McClure, co-author of "Hacking Exposed" and senior vice president of risk management product development for Foundstone, a division of McAfee. "[It's] probably [the] No. 1 or No. 2 problem with banks [and] financial services companies."

But what if you are not trying to protect a bank or financial institution? Is phishing no longer an issue? David Zumwalt, president and CEO of privacy management solution provider Privacy, Inc., says, "Phishers are also targeting those corporate network users they can fool into revealing their usernames and passwords so the phishers can gain network access without resorting to hacking their way in using more time-consuming and complex technical exploits."

Are Companies Liable?

The concept of phishing is new enough that there don't seem to be any well-defined guidelines to cover liability. Most of the existing discussion of liability focuses on whether the institution being spoofed will reimburse the phishing victim for his losses. That is a little like blaming the bait

Phishing On The Rise

This chart shows the number of phishing emails intercepted monthly by MessageLabs from August 2003 to November 2004.

SOURCE: MESSAGELABS ANNUAL EMAIL SECURITY REPORT 2004

Is Technology The Answer?

A good percentage of information security boils down to more of a social issue than a technical one. Many viruses and worms would never begin to spread if the users were educated enough to realize that they should not open unknown email attachments. Unauthorized users would have less success accessing confidential or sensitive data if users knew to choose strong passwords and not write them down on yellow sticky notes attached to the front of their monitor.

Phishing attacks are a subset of the spam epidemic. The actual attack generally arrives in the form of a spam email message. So, any technical solution that can be implemented to reduce or eliminate spam might also help minimize the threat of phishing attacks. But once the spam makes it past the email gateway and to the user's inbox, it becomes much more difficult to defend against using technology.

David Zumwalt, president and CEO of Privacy, Inc., says, "Many organizations are looking for a silver bullet. Unfortunately, as with most complex problems, the solution must be multifaceted, including technology, policy and business practices, and education."

Marcus Ranum, CSO of Tenable Network Security and author of "The Myth of Homeland Security," goes even further, stating, "It's not a problem that needs a technological solution. Remember Ranum's Law: You can't solve social problems with software."

and the fish for the fish getting caught, with no consideration for the fisherman. There is very little being done to identify or prosecute the actual phishers.

If an employee falls victim to a phishing attack using the company network, does the company have any liability? Zumwalt states, "The company liability, should an employee be phished, depends upon the consequences of the phishing attack. Should the employee be phished personally, the employee is probably on [his] own. Should the employee be phished and a corporate credit card account is compromised, the liability is based upon the credit card agreement with the bank, the company, and the individual cardholder. The biggest liability may come from a phisher gaining access to the corporate network."
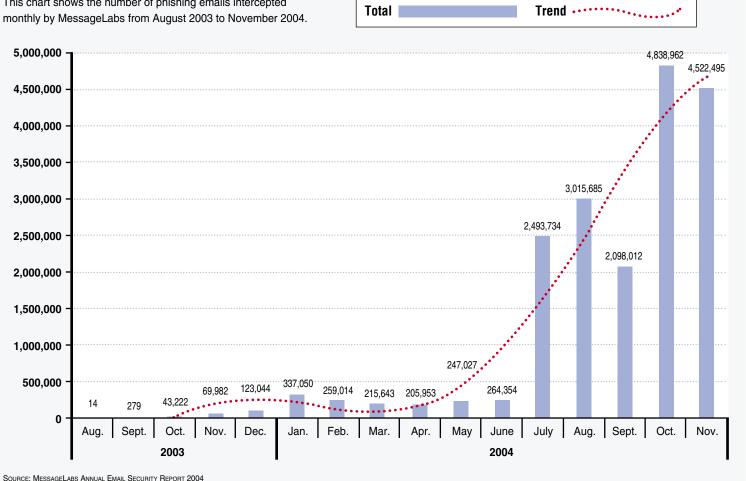
Bottom-Line Impact

If the company has no financial liability for employees who are victimized while using company resources, do they still need to be concerned about the threat of phishing scams? The answer is yes. At its core, phishing is simply a more vicious form of spam. Even if employees do not fall victim

Strategic Plans Critical To Midsized Businesses

IT Will Never Move Out Of Tactical Realm Without One

by Ericka Chickowski

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THE DEVELOPMENT OF effective IT strategy may be at the forefront of every CIO's objective list, but the reality for most leaders in midsized companies is that it is nothing more than an undelivered promise as likely to materialize as a raise in pay for the entire IT shop.

And yet, without strategic planning, no IT department can truly flourish at its highest potential.

According to many experts, this is especially true for midsized companies whose biggest asset is also their biggest liability—their ability to compete with both large and small companies.

"Good strategy and implementation processes are critical for midsize companies to achieve breakthrough performance," says Mark Friedman, founder of the strategic planning firm Real Time Strategy, in a recent whitepaper on the topic. "Midsized companies must remain nimble in order to compete with both larger companies and smaller ones, as either can wreak havoc on a midsized company's product, market position, and/or service model."

Challenges For Midsized Strategy

Friedman says that even though strategic planning is important for aligning resources and business processes, most midsized businesses fail to plan for three reasons.

The first reason is that midsized businesses have typically grown from smaller companies and can't shake the "small company's line of sight on internal operations," as Friedman puts it. As a result, they are averse to even discussing formal strategy.

The second reason is that they usually have limited financial and human resources to dedicate to planning, and the third is that their managers don't often know where or how to begin on a strategy.

Another key problem raised by analysts is the fact that businesses have no time to develop plans.

"When we talk to CIOs at midsized businesses, a lot of times, their pain points are extremely tactical," says Robert Brown of Gartner. "The day-to-day firefighting and just keeping the IT department up and running leaves very little time for strategic planning."

Susan Cramm of IT consulting firm Valuedance says that remaining in this tactical firefighting mode is one of the 10 biggest mistakes a CIO can make.

"If you are responding only to tactical issues and don't have a game plan, you won't be able to focus on how to move the department forward," Cramm says.

Fortunately, midsized businesses have an opportunity in 2005 to stop making this mistake. IT spending is supposedly on the upswing, with Gartner expecting spending to increase by 7% in 2005. This means there will be more resources ready for strategic projects and one fewer excuse to prevent planning. If managers hope to maintain the rest of the organization's confidence in the IT department, it is going to be up to them to ensure that there is a feasible plan to spend this newfound cash judiciously.

Suggestions From Gartner

Ray Laracuenta of Gartner discussed the development of effective midsized strategic planning recently at this fall's Gartner Symposium. As manager of a number of analysts who examine issues for SMBs, Laracuenta knows that strategy is one of the main issues that bind all the research together.

"In 2004, midsize business CIOs are finding themselves between the proverbial rock and hard place," he notes in his presentation slides. "They are being called upon to become more strategic in contributing business value at the same time that their budgets are being held steady or reduced. [Midsized business] CIOs in 2005 must show leadership by reining in this out-of-control situation."

Laracuenta stresses that one of the most important ways to improve strategic policy is to inculcate a "top down" culture in the department. This means that strategy should be developed at the enterprise level so that it trickles down through the organization. Projects should be chosen based on whether they are going to help with strategic goals.

This is in direct contrast with what Laracuenta calls "bottom up" management, with "the ultimate objective being a never-ending cycle of cost containment or revenue enhancement" for all projects, regardless of how they will affect the business as a whole.

According to Laracuenta, Gartner thinks that the best way to develop good strategy is to "shift from doing too much—risking failure—to beginning to focus limited resources on business-critical IT activities only."

This may mean outsourcing more transactional duties so that the in-house staff can focus on executing projects that will achieve strategic objectives.

In cases where the IT staff is overtaxed by projects required due to external forces—compliance, for example—he also suggests that a strategy could better leverage these necessary evils.

"Many CIOs consider these projects a necessary expense, a drain on time," he notes. "A better view is to look at the projects as opportunities to improve overall

> **Strategy should be developed at the enterprise level so that it trickles down through the organization. Projects should be chosen based on whether they are going to help with strategic goals.**

corporate performance by centralizing and automating processes more quickly."

Who Is In Charge Of Strategy?

Oftentimes IT managers develop strategies, but they never seem to be able to realize strategic goals. Whether you are one of these managers or you are developing a strategic attitude for the first time, it is important to consider who is going to be in charge of strategic planning and execution.

Analyst Marc Cecere with Forrester makes the case for developing strategic plans at the highest level possible. In his report "The Structure of IT: Midsize Shop Case Studies," he discusses one 120-person shop that buried strategic planning duties midway through the org chart within the operations IT cluster.

"The planning function in most organizations is weak—it doesn't control budgets or include large numbers of people. Placing it low within the organization reduces its base of power with an ongoing statement of how unimportant planning is," he says in the paper. "And placed within operations, it will be focused on infrastructure issues, rather than customer ones. Planning should report to the CIO and be combined with architecture."

Eight Steps To Create IT Strategies

In a recent Gartner Symposium presentation on the development of effective IT strategies for midsized businesses, Ray Laracuenta of Gartner laid out the eight critical steps to creating IT strategy. The last unnamed ninth step, he noted, is to recognize that strategies must be adjusted and maintained to stay relevant.

"What mostly drove strategy efforts into oblivion in the past was the expectation that the future is a more or less fixed thing," said Laracuenta. "The 1990s proved this wrong, and an unfortunate casualty was the idea of developing and keeping a strategy alive. The first eight steps can be viewed as a big one-time event; it's the ninth that makes it all worthwhile."

The eight steps Laracuenta identified are as follows:

1. Understand the business strategy.
2. Establish a governance process and financial toolset.
3. Define what the enterprise architecture must look like.
4. Examine the boundaries set by the current infrastructure architecture.
5. Define the application change strategy.
6. Define the IT operations strategy.
7. Define the people-sourcing strategy.
8. Document IT strategies.

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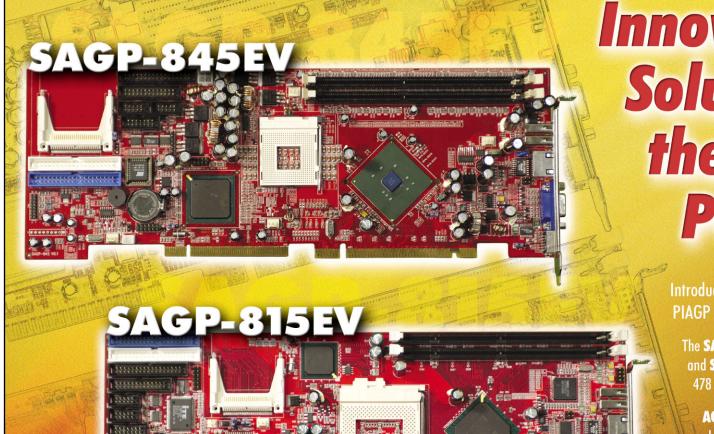
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Nearshoring Picks Up Steam

Reliable, Nearby Outsourcing Attracts U.S. Companies

by Christian Perry

· · ·

THEY SAY THAT HOME is where the heart is, but for U.S. companies looking to offload IT work, close to home might be just as good.

Nearshoring, the practice of sending work to nearby countries instead of overseas, continues to gain momentum in the United States as companies discover that countries such as Canada, Mexico, and Ireland can be smart choices for affordable, reliable outsourcing. Unlike India and China, many IT workers in some of these countries have an intimate knowledge of the U.S. market thanks to cultural or language similarities, or simply proximity alone.

"Based on the history of the IT service industry, a lot of Canadian IT professionals have had a great deal of experience working in the United States on projects," says Jim Westcott, a senior analyst with IDC Canada. "From that perspective, Canadian IT practitioners would have a really good understanding of the expectations of U.S. customers and the kinds of issues they deal with."

Westcott notes that consultants spent plenty of time traveling back and forth between the United States and Canada in the mid-'90s, contributing to an experience base that U.S. companies value today when it comes to outsourcing their work.

Yet this isn't to say typical offshore countries are necessarily losing business to nearshore countries; the entire outsourcing market continues to expand across all regions. Further, companies continue to rely heavily on factors other than proximity when opting for outsourcing.

In a nearshoring survey conducted last year by IDC, U.S. IT executives identified availability of experienced professionals and access to specific technical skills as the most important criteria for selecting an outside service provider. These were followed by cost and quality of English competency and cultural similarity.

Of course, some of these factors can be directly influenced by proximity to the United States, and the IDC study reflected that notion, as 42% of respondents indicated they weren't concerned at all about the distance to their nearshore provider, while only 24% answered the same about their offshore provider. IDC says in the report that "there is no doubt that it is easier for companies to control the quality of the deliverables when onsite project reviews can be easily arranged."

Another factor benefiting nearshoring countries is geopolitical stability. According to the study, 48% of respondents view Canada as having very high geopolitical stability, while fewer than 4% said the same about offshore countries.

Offshoring Still Rolling

Despite the perceived benefits of doing business with nearby countries, traditional offshore countries such as India, Russia, and China still receive the bulk of outsourcing, as established, reliable companies in those countries experience little trouble finding new contracts.

Nonetheless, concern still exists that nearshoring will begin to drain away local work faster than offshoring, but several factors should ease worries, at least for now.

"Canada's now pricing themselves out of the market because their dollar continues to rise," says Ken Wasch, president of the Software & Information Industry Association in Washington, D.C.

The Canadian dollar recently enjoyed its largest gain in 16 years, eliminating the cost savings previously seen by U.S.

> ## "Canada's now pricing themselves out of the market because their dollar continues to rise."
>
> *- Ken Wasch, president of the Software & Information Industry Association*

companies sending work to their northern neighbor.

"In Canada, typically what we saw was anywhere from a 15% to 30% price break," explains Westcott. "It's probably closer to the lower point now."

If the Canadian dollar remains strong while the U.S. dollar remains in decline, U.S. companies could start moving Canadian work to India and other offshoring countries where the currency is stable and helps to deliver consistent cost savings. However, the U.S. dollar still goes far in Mexico and Ireland, other prime nearshoring locations.

Looking Ahead

In Mexico, as well as Canada, nearshoring often retains a strong offshoring element, as India continues to extend its operations in these nearby countries. Although the cost savings of outsourcing in these countries (particularly Canada) aren't likely to compare to those had the work remained in India, U.S. companies previously sourcing the work to India can appreciate the easier physical access to their projects.

According to Westcott and Wasch, the quality of outsourced work isn't likely to change just because it's closer to home, although some factors, such as English proficiency, could play important parts in a company's selection of location.

"It's the responsibility of the outsourcer or nearsourcer to make sure that the quality of the outsourced or nearsourced component is as good as it would have been had it been done in the United States," says Wasch.

To offshoring companies, nearshoring doesn't appear to be a threat, partially due to the integration of their operations into nearshoring countries. And though the cost savings with nearshoring can be significant for U.S. companies, at present it's not vast enough to cause panic among domestic companies looking to keep work at home—at least not any more panic than is already caused by offshoring.

"In the U.S., the magnitude of the offshore market is much greater than the nearshore market, so most U.S. companies that are thinking of offshoring don't necessarily think of Canada as a top-of-line destination," says Westcott. "In terms of the expansion of the IT market, it's probably the offshore market that's still moving rapidly." ⊡

Why Are U.S. Companies Turning To Nearshoring?

Many U.S. companies looking to outsource to an outside service provider turn to nearshoring. Here are some reasons why.

- Convenient access to outsourcing companies
- Lower risk
- Higher cost than offshoring, but cheaper than U.S. labor
- More efficient communication
- Closer cultural affinity

Don't Get Hooked By Phishing

to the actual attack, the emails are still using network bandwidth, and the company still suffers from the loss of productivity.

The impact of spam in general on productivity and the corporate bottom line can be pretty hefty, according to Zumwalt. "According to various analysis firms, the cost of spam runs between $200 and $500 per user, per year, the bulk of which comes from lost productivity. This means that a company that has no anti-spam measures in place—with, say, 1,000 users, each of whom loses $350 of productivity per year to spam—will effectively waste $350,000 per annum."

Protecting The Network

There are some tools available to help network and security administrators proactively defend against phishing attacks, but not many. McClure says, "Many vendors are gunning for a product solution, including McAfee." It is a very new market segment, however, and there don't appear to be any solid solutions aimed primarily at defending against phishing attacks.

Zumwalt adds, "Most antiphishing solutions are geared to identify attacks that have been

> ## There are some tools available to help network and security administrators proactively defend against phishing attacks, but not many.

launched and provide blacklists to the major ISPs. Unfortunately, it can take anywhere from six hours to four weeks to take down an offending [Web site]. Sophisticated phishers simply establish new sites as the old ones are discovered."

Zumwalt's company, Privacy, Inc., makes a product called Opaque, which can help to defend against both spam and phishing attacks. The product essentially acts as an email proxy, hiding the true internal email addresses and sharing only virtual email addresses with the public Internet. Only approved senders are allowed to send email in to the network and unwanted or suspicious messages are blocked or flagged.

With the significant increase in phishing attacks and the subsequent impact on corporate networks and employee productivity, more companies are sure to jump on the bandwagon to attempt to address this issue. Zumwalt offers this caveat, though: "Technology must be combined with clear policy, matching procedures and education. Security solutions alone will not serve to protect sensitive data." ⊡

What's Happening ?

Making XML Easier To Share

W3C Endorses XInclude 1.0 To Ease XML Information Sharing Across Documents

by Stephen J. Bigelow

• • •

AS THE WEB GAINED POPULARITY, business-es quickly understood the limitations of everyday HTML. Some level of interactive operation was possible, but HTML Web pages were mainly used as bulletin boards. Business needed a much more robust and versatile means to manage and exchange data across the Internet, not to mention within an organization. XML evolved to meet the demand for superior data exchanges. However, XML's many potential schemas have created its own potential obstacles to

data exchanges. To smooth data sharing between diverse XML documents, the World Wide Web Consortium has recently endorsed a new specification: XML Inclusions Version 1.0 (or simply XInclude 1.0), which should ease the awkward workarounds now being used in the industry.

Success Is Everywhere

According to Philippe Le Hégaret, architecture domain lead at W3C, XML originally arose from a mixture of HTML and SGML as a superior means to exchange Web data. "The challenge was to put the SGML community and the Web community around the same table, back in 1995/1996, in order to come up with XML. So, back in early 1996, W3C hosted the first meeting of those folks, called SGML on the Web. From there, it grew at W3C into XML." XML was so successful that there have been few updates since its initial

> ## "Very little is needed to implement XInclude. In fact, existing valid XML parsers already [provide] some inclusion mechanism due to their support of DTD."
>
> *- Philippe Le Hégaret, W3C*

release. "We released XML 1.0 as a W3C Recommendation in 1998 and XML 1.1 in February 2004, mainly to support newer versions of Unicode, the character set used in XML," says Le Hégaret.

The success of XML, says Le Hégaret, can be seen everywhere in applications ranging from servers to desktops. "Nowadays, it [XML] is used as the basic format for data interchange—Web pages (XHTML), vector graphics (SVG), voice application (Voice-XML), B2B (Semantic Web, Web Services),

etc. Several applications are even using XML to save their internal data or configuration state; OpenOffice and Microsoft Word can now save in XML."

Plots & Schemas

XML itself has become a staple of business communications, and it's not difficult to translate XML documents between schemas. "XML has a major advantage over other formats. Despite different schemas, one can transform an XML document to another using XSLT (i.e., without having the burden of writing a complete application for that purpose)," explains Le Hégaret. However, XML authors (developers who create company or industry-specific XML data subsets called schemas) have wrestled with problems of sharing data elements between XML documents; an issue Le Hégaret calls "inclusion," which is accomplished by merging a number of XML information sets into a single composite set of data. "Inclusion is the ability to reuse content, which lets me take something like a copyright statement and include it on all my company's XML documents. Without an inclusion mechanism, you have to copy and paste, and this lets you just reference it [the element that you're copying/pasting]," notes Le Hégaret.

Until now, XML authors have been forced to use DTD (Document Type Definition), a server-based set of instructions that help workstations interpret XML documents and their elements. But DTD is cumbersome and inconvenient to use, and the W3C is leading the move away from it. For example, W3C has mandated use of the XML Schema specification in other efforts such as SOAP (Simple Object Access Protocol) 1.2 and WSDL (Web Services Description Language). The recent introduction of XInclude 1.0 should help to ease data sharing without the need to move to a single, universal schema.

The development of XInclude 1.0 had its share of roadblocks, though. "The major issue has been architectural, given the ability of XInclude to transform data into XML or plain text, independently of the original type of the data. This issue has been resolved in the W3C recommendation," says Le Hégaret.

Getting XIncluded

"Very little is needed to implement XInclude. In fact, existing valid XML parsers already [provide] some inclusion mechanism due to their support of DTD," says Le Hégaret. "XInclude is a simpler but yet more powerful way to do those inclusions, as well as providing fallback mechanism in case the external resource cannot be retrieved for inclusions." The trick is for XML developers to ensure that an organization's XML parser is adequately updated to support XInclude. "No real changes to the infrastructure or software is needed. APIs, like SAX or DOMs, do not need a

new revision in order to support XInclude; it's the job of the XML parser," he notes.

Given the direct effect that XML can have on potentially important corporate data, Le Hégaret suggests that XML developers exercise great care when preparing XML products for deployment. "Upgrading XML schemas [and] documents to support a new version of an XML application or deploying new Web Services [has] triggered lots of issues in the enterprise." Extra

precautions should be taken to ensure smooth version transitions.

Ultimately, Le Hégaret sees a very bright future for XML. "The use of XML as an interchange format will continue to spread across the industry; there are still lots of applications out there that ought to use XML as their format, thus enabling others to reuse their data more easily." A new release of XML may also be somewhere on the horizon, says Le Hégaret. "The next major milestone for XML will be the result of the XML Binary Characterization Working Group, which may lead us to provide a new major release of XML." In the meantime, XInclude has been added to the core technologies for XML, but there are no immediate plans for an updated specification. "There are no plans for future versions of XInclude at this time. The next needs [of XML users] are currently too domain-specific to be integrated into a generic mechanism such as XInclude."

What's Next

▌XML Getting Faster

XML HAS EMERGED as an essential tool that allows users to share information online. Although XML has proven its robust capabilities and versatile operation, it is not a particularly efficient language. XML works with text data that is readable by people and XML parsers (command processing programs). XML data sets, labels, and tags can all combine to generate very large files. When matched with XML-based protocols (Web services), XML exchanges often result in a great deal of traffic.

Developers are looking to the future of XML by exploring a new format to compress XML transmissions, dubbed binary XML. There are several projects ongoing, including Sun's Fast Infoset Project and the Binary Characterization Working Group sponsored by the W3C. The hope is to eventually use binary XML to boost the performance of XML-based applications ranging from ebusiness to data exchanges between mobile devices. As work continues, however, there is concern that the move to a new XML format may cause incompatible XML versions, making the issues of backward compatibility extremely important for future adoption.

▌New Paint Blocks EM Emissions

WIRELESS NETWORKING HAS BECOME a popular means of connecting PCs and peripherals, allowing network and Internet access without the hassle of physical wiring infrastructure. Mobile PC users (and users in temporary locations) particularly benefit from the flexibility offered with wireless technologies such as Wi-Fi, WiMax, Bluetooth, and UWB. Unfortunately, wireless networks are notoriously difficult to secure, often allowing unauthorized wireless users to piggyback on local wireless availability, potentially exposing personal data (even corporate networks) to attack.

One solution to securing a wireless network is to limit the electromagnetic (aka radio) signal strength outside of an authorized area. Companies such as Force Field Wireless have developed DefendAir Radio Shield, an EM-resistant paint additive that can reduce the transmission of radio waves through walls, ceilings, and doors. The additive mixes copper and aluminum fibers into the paint, effectively establishing a Faraday cage within the painted area. However, the use of such products will also block TV, radio, and cell/wireless phone signals.

▌Hard Drives Reaching Size Limits

SMALL HARD DRIVES have established themselves in many commercial electronic devices such as MP3 players, digital cameras, cell phones, and even video recorders, typically competing against other storage technologies such as flash memory. As hard drives have continued to shrink, reductions in platter area have drastically reduced the available storage area. According to industry analysts, today's miniature drives with 0.85- to 1-inch platters have probably gotten as small as possible (while still able to provide more storage than flash memory for a comparable price). Although physical sizes are unlikely to shrink much more, capacities should continue to improve as new drive storage technologies work into the products. For example, perpendicular recording techniques should help to move miniature 4GB to 5GB drives to 8GB to 10GB within the next year or so.

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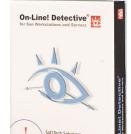
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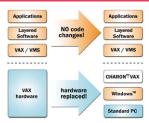
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Application Code Review
Virtual Booth 3815 • Virtual Product 1607

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IT Security Management
Virtual Booth 3870 • Virtual Product 1705

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Virtual Booth 4099 • Virtual Product 2067

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LCD Display
RS232 Access

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Power Control & Monitoring
Virtual Booth 2144 • Virtual Product 778

RS232 Access
LCD Display
8 Rebootable Receptacles

8 RECEPTACLE POWER CONTROL AND MONITORING

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RS232 Port　　Transfer Switch
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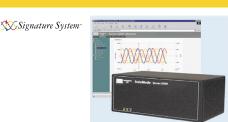
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- Applications: security accelerator, IPsec appliance, SSL appliance, Multi-segment management appliance

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Fax: (510) 790-9191
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Internet Content Filtering
Virtual Booth 3918 • Virtual Product 1791

NetSpective WebFilter

NetSpective WebFilter lets corporate managers prevent employees from accessing URLs that contain content the company finds objectionable.
- Supports all network environments
- Plug & Play simplicity
- HTTP, P2P, and IM blocking
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XML Security Gateway
Virtual Booth 3825 • Virtual Product 1619

List price
$65,000

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Sensitive Content Protection
Virtual Booth 3903 • Virtual Product 1773

Content Alarm™ is a security appliance that continually monitors all outgoing network traffic, leveraging patent-pending technology, accurately determining if trade secrets, source code or other intellectual property is being transmitted outside of the network.

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Internal Network Security
Virtual Booth 3890 • Virtual Product 1753

Mi40 Inverted Firewall Appliance
Stop attacks that bypass your perimeter security. The Mirage Networks Inverted Firewall is the first network security appliance designed to stop rapidly propagating threats on internal networks. The self-contained, out-of-band appliance detects and automatically contains worms and other malicious traffic without the need to deploy agents, update signatures, or rearchitect your network.

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Fax: (512) 874-7806
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Intrusion Prevention System
Virtual Booth 3716 • Virtual Product 1353

Starting From
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Interceptor - Stops Network Attacks in Real Time
- Internal & External Protection from DoS, DDoS, Worms, Viruses, Syn Floods, Trojans, Scans and Access Control
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IDS Load Balancer
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Balancer for IDS, Network Analyzers, Forensics Systems, and Rmon Probes

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3Gbps Application Security
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Multimedia Notebook
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N15RB

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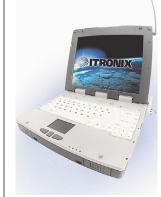
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- **Optical Drive:** 8X DVD-ROM/24X CD-RW

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Encryption Device
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Virtual Booth 1864 • Virtual Product 83

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Virtual Booth 3951 • Virtual Product 1860

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Virtual Booth 4047 • Virtual Product 1989

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The Galaxy

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- Integrated ATI Rage XL SVGA PCI video controller
- 1 x Intel 82547GI CSA, 1x Intel 82541 Gigabit Ethernet controller
- RAID 0, 1 supported

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- 3Ware 12-port SATA controller card
- Western Digital 250GB 7200RPM hot-swap SATA drive with 8MB cache
- 12 x 1" hot-swap SATA drive bays
- ATI Rage XL SVGA PCI video controller with 8 MB of video memory
- Single Gigabit LAN

SD3-1204C
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- Supermicro X5DPE-G2 server board with Intel E7501 chipset
- Kingston 512MB PC2100 DDR 266 ECC Reg. RAM
- 3Ware 8-port SATA controller card
- Western Digital 250GB 7200RPM hot-swap SATA drive with 8MB cache
- 16 x 1" hot-swap SATA drive bays
- Dual Intel 82546EB Gigabit Ethernet ports

SD4-1301S
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- Kingston 1024MB PC2100 DDR 266 ECC Reg. RAM
- 3Ware 12-port SATA controller card
- Western Digital 250GB 7200RPM hot-swap SATA drive with 8MB cache
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